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ABSTRACT

Economic, technological, and social changes occurring around the world have produced incredible challenges for youth, symbolized by persistently high youth unemployment rates despite increasing educational attainments and a shrinking youth population. Chapter 1 of this book provides an overview of the initiatives undertaken by Canada and the province of Nova Scotia to address these challenges, and focuses on the Nova Scotia School-to-Work Transition (NSSWT) program. This program had a common set of parameters and objectives, but allowed site-specific variations in implementation. Chapter 2 highlights successful proposals and the similarities and the differences among the 6 actual implementations. Generally, the programs included an in-school component of 20-60 hours per year in grades 11 and 12 devoted to career exploration, career guidance, and job skills, and a work experience component of 125-200 hours per year in the 2 grades. Chapter 3 describes the backgrounds, characteristics, and aspirations of participants and a comparison group at the start of the program. Females made up about two-thirds of participants, who otherwise reflected a range of backgrounds and characteristics. Chapter 4 documents program effects and assesses the extent to which program objectives were met. Program completion rates were low; 54 and 37 percent for the two cohorts studied. Student outcomes yielded a mixed message. Participants who completed the program were very clear that it had met their expectations. However, there were few differences between participants and the comparison group in academic achievement, skills enhancement, higher education outcomes, or employment outcomes. Chapter 5 focuses on the expectations of the employers/supervisors and the schools and how they contributed, or not, to the program's functioning. Chapter 6 examines program effectiveness based on an independent assessment of the program. Appendices list primary data

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sources and other reports on the NSSWT project. (Contains 46 references and a glossary.) (TD)

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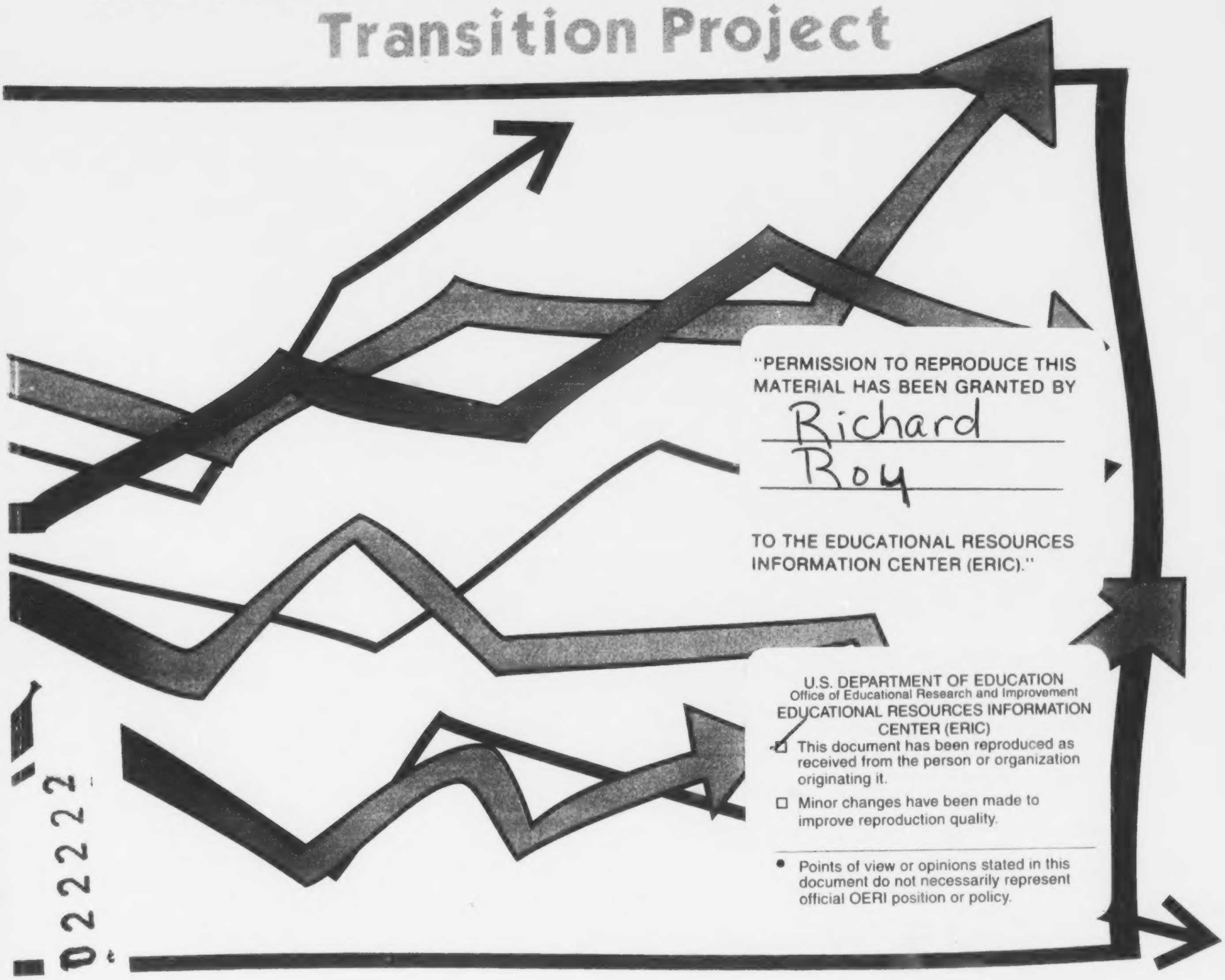

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INVESTING IN YOUTH:

THE NOVA SCOTIA SCHOOL-TO-WORK TRANSITION PROJECT

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To Peter C. Pineo who taught me the importance and rewards of attention to detail in social analysis

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The Nova Scotia School-to-Work Transition (NSSWT) program grew out of a recognition that new approaches addressing youth transitions out of high school and into the labour market or post-secondary educational institutions were needed. Bringing it from idea and design through to implementation and assessment required the dedicated effort of many individuals. We would like to acknowledge and thank them for their efforts.

Special thanks are due to Louise Boyer for her energetic direction and guidance of the project. Prior to his retirement from Human Resources Development Canada (HRDC) Doug Giddings was a strong supporter of this project. Kathleen Fogarty reviewed drafts of many of the reports that formed the basis of this book and made helpful suggestions and comments.

The amount of time and cooperation students and parents gave to the project was quite amazing. As will become clear in this book, the participants in the program had a demanding schedule, particularly in Grade 12. On top of that, some students were faced with as many as four questionnaires, two focus groups, two skills tests and an in-depth personal interview. Although at times participants grumbled about the length of individual questionnaires, they showed an impressive commitment to the program and its research component. The research demanded less of the parents, but their cooperation equalled that of the participants.

Work placements formed the backbone of the NSSWT program. These required the voluntary participation of numerous employers. Not only did these employers provide suitable placements, they developed work plans, supervised the work, evaluated the performance, maintained ongoing contact with the project coordinator, and filled out several questionnaires. Almost without exception, participants and project coordinators praised the commitment of the employers. We would like to add our thanks.

The case studies were conducted by Chaytor Educational Services and documented in the reports listed under that authorship in the references. Dianne Looker designed the many questionnaires that provide the data for the bulk of this analysis. Stan Jones analyzed the skills tests. Barbara Cottrell was a co-researcher on the strategic participant interviews. Additionally, she provided helpful feedback on earlier drafts of this book.

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Preface

Overview

This book highlights a particular school-to-work transition program that was undertaken in Nova Scotia, Canada from 1995 to 1998. It provides an overview of the process followed, the outcomes and the lessons learned so that policy makers who are interested in school-to-work transition issues will have relevant information. It also provides descriptions and analyses that are useful to educational practitioners who are interested in implementing their own school-to-work transition program.[1]

A major strength of the current project[2] is the systematic assessment that was built into the project from the beginning. The quantitative research component consisted of questionnaires being administered to over 500 students, their parents, employers and work supervisors; skills tests; and analyses of the students' marks as recorded in school records. Additionally, because of the relatively small number of participants in any given site, the quantitative research was complemented by case studies and interviews with project coordinators, strategically selected participants and their parents.[3] The richness of this qualitative information helped compensate for the limited sample size. A particular strength of this research derives from the fact that, where feasible, students were randomly assigned to either the group that would participate in the program, or a comparison group, which also completed the relevant questionnaires. This design feature allows solid inferences to be made about the effects of the program. Information was also obtained at several points in time, permitting documentation of changes from the time before entering the program to one year after completion. This detailed research process not only provides the basis of the current analysis, it also enabled ongoing feedback during the course of the project, which allowed concerns or problems to be addressed quickly and efficiently.

In order to understand the outcomes of this program, it is important to first appreciate the context in which it was provided. Nova Scotia is a relatively small province

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[1] Additional details of relevance to such practitioners are provided in the reports, listed in Appendix B, that analyze the different data sources in more depth.

[2] The NSSWT project includes all the activities related to the research component of the program. Refer to the glossary (just prior to the appendices) for a list of terms and their definitions.

[3] See Appendix A for a full listing of the data sources used in this analysis.

(both in population and geographic size) in eastern Canada. Relative to Canadian provinces in central and western regions, and like the other eastern provinces, it has in recent years experienced chronically high unemployment rates, particularly among young people. While there is both seasonal and sub-regional variation in these rates (see Chapter 1), the overall picture is one of an area that struggles to provide jobs for its residents. As is true throughout Canada, patterns of labour force participation rates and unemployment rates reflect consistent gender differences.

Like many other areas of Canada, Nova Scotia is facing a shift in the structure of the labour market – a shift characterized by a decline in jobs in the middle range of skill levels, and an expected growth at the two extremes of the skills spectrum. There is indication of expansion in high-end professional and managerial positions and of lower-skilled sales and service positions. Given this scenario, the question is how best to position students so that they can move into the higher rather than the lower-end jobs once they complete their education.

The Nova Scotia School-to-Work Transition (NSSWT) program was initiated, with funding from Human Resources Development Canada (HRDC), to help address this issue. The overall intent was to initiate a program in the high schools that would provide students with both work experience and in-school instruction relevant to the transition from school to work. Unlike the co-op programs in Nova Scotia, which tend to target students with high academic performance, this one was designed for a broad range of students, from a variety of ethnic and cultural backgrounds, with the condition that they could reasonably be expected to complete high school.

The design of the program called for it to be offered over a two-year period when students were in Grade 11 and Grade 12, the last two years of their secondary education. There was provision for two work experience periods, each at least 140 hours long, one in each year of the program. The in-school component, which included various work-related topics (see Chapter 2), was designed to be at least 20 hours in length. Overall, the total number of hours for the program was to be at least 160 hours a year to make it comparable to the co-op program at some of the program sites.

In response to a call for proposals, 19 sites interested in offering the NSSWT program submitted proposals. Six (Amherst, Halifax, Sydney, Pictou, Truro, Yarmouth) were chosen, based on their conformity to the program parameters (see Eaton and Boyer 1995). In some sites, more than one school was involved in the program delivery. A key criterion in the evaluation of the proposals was the likelihood that the program would be sustainable beyond the time frame in which HRDC funding was available. The program was offered to two cohorts of students, one that started Grade 11 in 1995 and a second that started Grade 11 in 1996.

Two of the six sites chosen to offer the program (Halifax and Sydney) are part of the only two metropolitan regions of Nova Scotia; the remaining four sites are in rural areas of the province. Given that the population of Nova Scotia is split almost evenly between those who live in urban and those who live in rural areas, data from the different sites provide interesting information for policy makers and practitioners who are dealing with a geographically dispersed and diverse population.

The individual sites were given considerable autonomy with respect to the design and scheduling of both the in-school and the work experience component. The rationale for providing such autonomy was that each area should decide the specifics of the programming that would best suit their students. Also, it was expected that having a variety of implementations would allow an identification of "best practices" in a way that would not be possible with forced consistency. For much of the current analysis, results from the six sites were merged to identify general patterns. Details on the variations across sites are presented in the *Design and Implementation* chapter (Chapter 2), while outcomes in the different sites are discussed in Chapter 6, the *Lessons Learned and Lessons Confirmed.*

Notwithstanding this built-in variation, all sites were required to meet a number of parameters, including sustainability beyond the period of HRDC funding. The specific implementations were designed to meet a set of common objectives.

The objectives for the students included completing high school as part of a broader concern to facilitate their transitions to work or further education. By providing students with appropriate work experience, other objectives, such as developing their skills, linking their education with workplace issues, and creating realistic work expectations, should also be enhanced. Together, these things should improve their educational and occupational choices.

Developing partnerships with schools was a main objective for employers. Through providing appropriate work placements, the objective of assisting students to develop relevant skills was to be furthered. Such activities should also enhance employers commitment and involvement in education and training.

Finally, for the schools the objectives were to have all educators understand the world of work and to have them gain a realistic view of both employers and the workplace. Such objectives were to be achieved through workplace internships and teacher in-service presentations on workplace topics.

It is obviously easier to evaluate the effectiveness of the program in meeting some of these objectives (such as how many students received a high school completion certificate) than others (such as providing a realistic view of employers and the workplace to all educators in a particular school system). Where direct information from records, questionnaires or interviews are not available, indirect information (such as reports from students or project coordinators about teachers' attitudes) is relied on.

A key part of the baseline data, gathered from students at the beginning of the program, is establishing what, if any, differences exist between the students who participated in the in-school and work experience components of the program on the one hand, and the members of the comparison group, on the other. Students in the comparison group did not participate in the program, but did provide information for the research component of the project. If large differences were found before the program started, these initial differences, and not the program, might well account for group differences in outcomes. Another contribution of the baseline data from students, parents and employers was to provide information on the expectations that various stakeholders had for the program.

While some interesting variations on specific issues emerged (see Chapter 3), overall the analyses revealed few initial differences between the participants and the members of the comparison group. The comparison group held somewhat higher educational expectations than the participants at the start of Grade 11, as well as higher self-reported levels of skills. These differences may reflect the somewhat higher levels of education among the fathers of the comparison group students. There were also some intriguing gender differences in the Grade 11 baseline data, differences that become more significant when one recognizes that a disproportionate number of young women applied to, and participated in, the program.

Consistent with the design of the program, which was to attract students with a range of academic abilities, both participants and members of the comparison group showed varied levels of academic performance. While neither low nor high performers were excluded, most students fell in the middle range of marks at the beginning of Grade 11. Most said they liked school and faced the future with optimism, expecting both advanced education beyond high school and enjoyable, rewarding, secure jobs. The students and their parents saw the NSSWT program as providing an opportunity to smooth the students' transitions into attractive careers.

The primary focus of the analysis of outcomes concentrates on student outcomes. An important part of the outcome analysis is an examination of program attrition – how many students started the program in Grade 11, but did not complete the full two years. Such an examination is important partly because attrition can itself be seen as an "outcome"; if large numbers of students fail to complete the program, this signals a need for a change, either in the content of the program or in the type of student who is admitted. An attrition analysis is also important to ensure that the other data on outcomes are not distorted by differential attrition in the participant versus the comparison group.

The analyses (see Chapter 4) revealed that while the attrition rates were unacceptably high, they did not seriously compromise the comparability between the two groups. However, distinct differences did exist between those who left the NSSWT program within the first year and those who left during the second year. The former group tended to be weaker academically, the latter were stronger and had taken on heavier course loads. Time commitments were a major issue, raising questions about how best to design a program that provides serious content without exacerbating the heavy time demands faced by students in their last year of high school. Overall, beyond recognizing the diversity among the program leavers, it appears that those who left were not particularly dissatisfied with the program in particular.

In terms of academic performance, participation in the NSSWT program had a somewhat negative effect on marks in other classes. Marks in the NSSWT program did, however, tend to be higher than those in other classes taken by these students. While this may well reflect the greater relevance of the program to the students' experiences, and/or high levels of student interest in school-to-work transition issues, it could have negative repercussions for the long-term viability of the program. A program is not likely to be attractive to parents, teachers or school officials if it becomes defined as an "easy credit" – whether or not that definition is warranted.

The results also suggest that NSSWT graduates were somewhat more likely than the comparison group to complete high school graduation requirements, but somewhat less likely than those in the comparison group to meet standard university entrance requirements, at least in some of the program sites. The considerable site variation, for both comparison and participant groups, suggests the importance of school-level effects on the academic performance of students.

The one-year follow-up interviews showed significant differences between participant and comparison students in how well they felt their high school program facilitated their transition into either the labour market or post-secondary educational institutions. Participants of the program felt their high school experience prepared them better in a variety of ways, such as helping them decide on their future occupation and understanding employer expectations.

Both the participants and the members of the comparison group maintained, through to the end of Grade 12, their high level of optimism with respect to their educational and occupational expectations, and their more general expectations for the future. There is some suggestion that the NSSWT participants were more willing to consider a wider range of post-high school options, including non-university forms of post-secondary education, than the comparison group.

Employers anticipated a variety of benefits to their organizations, some focusing on the actual work the participating students would perform. Many employers reported that they saw their involvement in the program as something they were doing either for their community as a whole or for young people in particular. They also saw the program as an opportunity for building stronger partnerships with the schools (see Chapter 5).

Forming and strengthening such partnerships was a central objective of the program design. To facilitate these partnerships, each site was to have a local management committee, which would design and oversee the implementation of the program. While some of the local management committees were quite active initially, few maintained a visible presence throughout the three-year period. Despite the inclusiveness evident in the proposed composition of these committees, parents and business representatives actually played a lesser role than was desired or expected (see Chapter 5).

Involvement of school personnel is obviously central to school-work partnerships. Information directly from educators on how the program might have affected their teaching was not gathered. The current analysis is limited to information on the involvement of educators in the local management committees, supplemented by the perceptions of students and project coordinators with respect to the attitudes of teachers and other school officials. This indirect evidence suggests that the program had little effect on the attitudes of teachers and other educators.

Through the efforts of the project coordinators, the program was able to find work placements with higher skill requirements than high school students typically are able to obtain on their own. These were often in work settings the participants expected to enter after completing their formal education.

Overall, few large, measurable effects can be attributed specifically to participation in the NSSWT program. Despite this fact, a recurring finding is that the participating students, their parents, their employers and supervisors consistently expressed their satisfaction with the program. They felt it met or exceeded their expectations, and they would recommend the program to others. The project coordinators were consistent in their feeling that the program should be continued in some format in their area.

How can one reconcile these two findings? Certainly, the results suggest caution in relying on participants' levels of satisfaction as the sole measure of the effectiveness of a program. Taken together with the case studies, strategic interviews and meetings with project coordinators, the data from school records and the questionnaires do suggest some best practices and lessons learned (see Chapter 6) that are most likely to contribute to a successful program.

These analyses also highlight the need to define and implement practices that facilitate the transition from secondary to post-secondary education rather than just the transition from school to work. The majority of these high school students want and expect to pursue post-secondary education; they want and expect high status professional and semi-professional jobs that require advanced education. A high school program designed to help them make career decisions can facilitate this process, but it would look very different from one that is preparing students to move directly out of high school into the full-time labour market. It is clear that the students attracted to the NSSWT program were diverse in many ways (although certain groups were overrepresented and others almost absent). The question is whether one program can meet the diverse needs of secondary students as they prepare to move beyond high school, or whether the target audience and the objectives of the program need to be more clearly defined. The current analysis provides the basis for a partial answer to this very important question.

Chapter outline

Economic, technological and social changes are occurring with lightening speed in countries around the world and they have produced incredible challenges. These challenges are symbolized by persistently high youth unemployment rates despite increasing educational attainments and a shrinking youth population. In Canada, these challenges were addressed by various government policy and program initiatives. Chapter 1 provides an overview of both the context and the initiatives undertaken by Canada and the province of Nova Scotia. One of the initiatives was the NSSWT program.

This program had a common set of parameters and objectives, but as already indicated, it respected site-level variations in how the program was actually implemented. To be considered as a potential site, school boards had to submit a proposal, and highlights of the successful proposals are provided in Chapter 2. These give a sense of both the common expectations and unique components in the structure of the local implementations. In addition to the proposed designs, this chapter describes in detail the similarities and differences among the six actual implementations.

The next chapter focuses on the participants, describing their backgrounds, characteristics, hopes and aspirations at the start of the program. It also assesses any preexisting differences between the participants and their comparison counterparts as a prelude to evaluating program effects.

These effects are documented in Chapter 4 and the extent to which the program objectives were met is assessed. Did variations in the site implementations make any differences in the student outcomes? In this chapter, the participants are again contrasted with the comparison students, but this time, about two years later, to capture the program effects.

Chapter 5 focuses on two other partners in the NSSWT program: the employers/supervisors and the school. What were their expectations of the program and in what ways did they contribute to its functioning or lack thereof?

The book then looks at the lessons learned and the lessons confirmed through this project (Chapter 6). It grapples with why some things worked and others did not, and attempts to answer the question, what are the best practices that emerge from the variations in the implementations?

During this project, many lessons were learned. Some are based on positive experiences and outcomes of the program; others emerged from unanticipated shortcomings. This book documents both what worked and what did not, since sound policy must be cognizant of both. It is to the credit of both the Nova Scotia Department of Education and Culture and Human Resources Development Canada that they welcomed an independent assessment that would show the warts as well as the beauty marks. It should be understood, however, that the assessment and views expressed in this book are solely those of the authors and are not necessarily shared by either the provincial or federal levels of government.

Intended audience

In only four years, the NSSWT project produced over 25 reports (see Appendix B). The amount of information pertinent to the project is almost overwhelming. For the purposes of this book, decisions had to be made about what to include and what to cut out. Four criteria were used to determine what information should be included – criteria that point to the intended audience.

First, will the information familiarize other regions of Canada and other countries about the climate and context in which the NSSWT program operated? Such information could be vitally important for determining the limits of the applicability of the documented effects. These, in turn, could suggest necessary modifications to programs introduced in other settings. The relatively high youth unemployment rates and the embryonic stage of the provincial community college system, for example, are features that likely affected a number of aspects of the NSSWT program.

Second, does the information assess how well the objectives of the NSSWT program were met? This information is essential for drawing inferences about best practices and for making policy recommendations and decisions.

Third, does the information reveal the specific features of the NSSWT program that might have a bearing on its effectiveness? For example, half the project coordinators were teachers. Although this was not an intentional part of the design, the background experience of the project coordinators likely affected the specific implementation.

Finally, will the information be useful to anyone developing or implementing a new school-to-work transition program? Information about specific tasks assigned to the project coordinators, for example, or the topics covered in the in-school component of the program, would be beneficial.

This book was written for several audiences. The primary audience consists of practitioners in both school and community settings who are involved in work experience programs. A conscious effort was made to identify findings and point to lessons learned that would be of relevance to these practitioners. A related audience includes policy makers who hold responsibility for school-work issues. This book shows the interface between youth, work, family and community. It could help to inform policy in each of these domains.

Although less directly, the book is also addressed to academics and scholars interested in young people's transition to adulthood. Finally, this book should be of interest to the ordinary citizen – whether this be a high school student, a parent or an employer – who wants to better understand how one group of high school students started to prepare themselves for a rapidly changing world of work and adulthood, and in what ways the NSSWT program facilitated their efforts.

To some extent, the different audiences will have divergent interests so that not all chapters will be equally relevant. For this reason, some attempt was made to create chapter self-sufficiency without being overly repetitious.

The different audiences will also have varying levels of interest and competence in the methodological underpinnings of this research. To accommodate these differences, the authors chose to present findings using simpler and more readily understood statistical techniques, even where other techniques might arguably be more suitable. Additionally, methodological considerations relevant to a particular finding or interpretation are often relegated to footnotes.

1 CONTEXT AND RESPONSE

Introduction

The demographic, economic and educational contexts in which the Nova Scotia School-to-Work Transition (NSSWT) program emerged likely had a strong bearing on both its appeal and its effectiveness. This chapter places the local sites into their broader Canadian and Nova Scotian settings. It further describes the conditions under which the NSSWT program was operating and suggests the parameters under which the lessons learned may be applied elsewhere.

It is well known that the economic base of Canadian society has witnessed a pronounced shift from agriculture and manufacturing to community, business and personal services. Employment in the latter areas almost doubled in recent years, increasing from 20 to 38 percent between 1961 and 1997 (from Table 1 in Human Resources Development Canada 1998). An important feature of the service sector is that it encompasses jobs at the polar extremes of skill levels. Jobs with potential are found in the financial and business sectors, whereas low-paid and low-skilled jobs are frequently found in retail trade and consumer services. Occupational projections reinforce the conclusion of a bifurcating labour market, with greatest growth expected in jobs that require more than 16 years of education (55%), and those requiring less than Grade 12 (40%) (Human Resources Development Canada 1997b).

As well as having a high concentration of employment in the service sector, the Canadian economy is increasingly characterized by non-standard work arrangements, such as part-time, short-term and self-employment. For example, in 1986, 26 percent of employed women, and 8 percent of employed men held part-time jobs (Statistics Canada 1986). By 1996, these figures had increased to 33 percent and 15 percent, respectively.[1] As the Organisation of Economic Co-operation and Development (OECD) notes, countries like Canada, in which part-time work is prominent, tend to have high proportions of students combining work and study (OECD 1999).

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[1] Customized information from the 1996 Canadian Census on number of males and females employed full time and part time by occupation was kindly made available by Jennifer Jarman of Dalhousie University.

While the Canadian employment growth rate is solid, its unemployment rate also remains relatively high, although the Statistics Canada labour force annual averages show a decline from 12 percent in 1983 to just eight percent in 1998. More importantly, in recent years the youth unemployment rate (15-24 age group) has remained close to double that of the adult rate.

Educational attainment remains a crucial determinant of labour market outcomes. Completing high school is especially important for getting a job; the unemployment rate of high school leavers is almost double that of high school graduates (16.0% and 8.8%, respectively). Post-secondary education reduces the unemployment rate even further, with university graduates having an unemployment rate of 4.8 percent in 1997 (Statistics Canada 1997).

While these characteristics of the Canadian economy are relevant to school-to-work programs in general, of more direct relevance is the site-specific information that is provided in this chapter. As will be seen, the regions in which the implementations were located differed substantially, even dramatically, in some respects. These differences need to be kept in mind; they modulate the possibilities and the constraints.

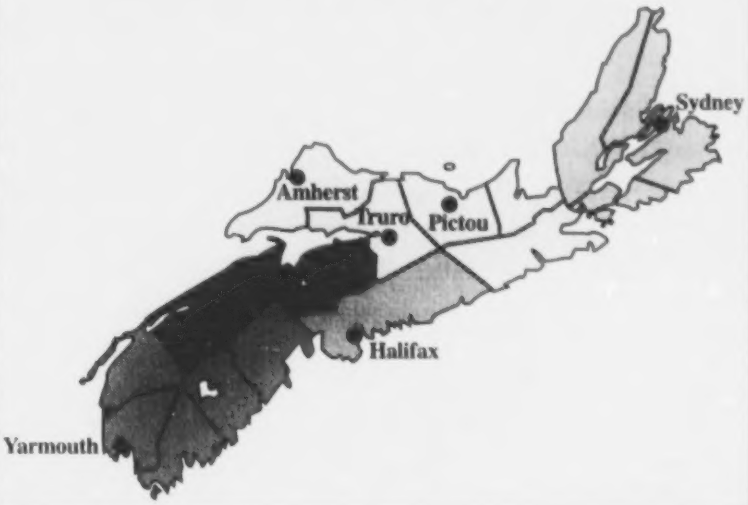
The sites

The six sites selected to offer the NSSWT program are located in diverse regions of the province (see map).

Although the implementations were connected with specific schools, they are referred to by the town or city in which they are located. It is important to keep in mind that the catchment area is broader than the name of the site might imply.[2]

Figure 1-1

NSSWT site locations



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[2] The Sydney site draws students from Sydney Mines, North Sydney, Florence and Bras d'Or rather than from Sydney proper; however, the site is close to Sydney and part of that labour market.

Employment context

It is widely recognized that today's youth face several potential obstacles to employment that are unique to their generation. They are entering the labour market at a time when members of the baby-boom generation are still in the prime of their occupational life. They must compete for jobs in a context where young women, as well as young men, take it for granted that they will spend most of their adult lives in the labour market. These young adults are witnessing the restructuring of the Canadian economy as it is driven by global competition. They are attempting to make the transition to full-time participation in the labour market precisely when companies are introducing a variety of practices that permit them to downsize, not the least of which is the widespread and increasing use of computer-based technology.

Gainful employment is fundamental to individual and social well-being. Unemployed young people are known to be more vulnerable to a variety of personal and social ills, such as psychological distress and family conflict. They are also more likely to engage in criminal activity. The available evidence indicates that the effects of youth unemployment are also long term and negative – such as heightened chances of future unemployment. For these reasons, it is important to document the level and distribution of youth unemployment in Nova Scotia. This is done in the next section.

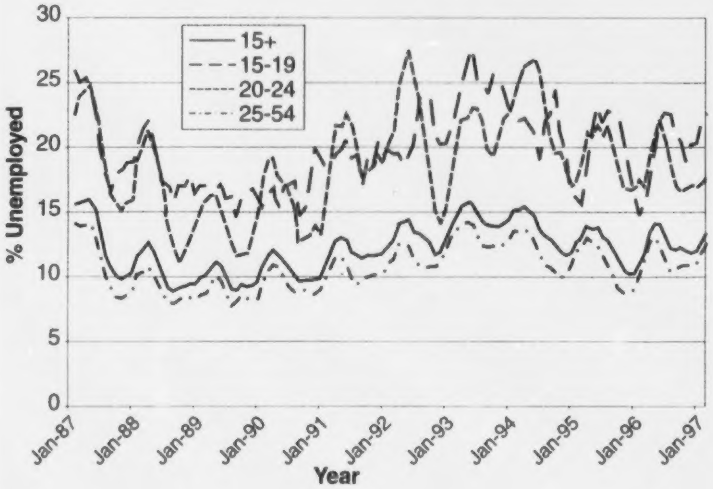
Age and employment

The Nova Scotian economy, like that in other parts of Canada, exhibits both seasonal fluctuations and long-term trends in employment. Figure 1-2 shows the Nova Scotian unemployment rates for three age categories, as well as the overall rate, for the past 11 years, as calculated by Statistics Canada. The solid trend line in Figure 1-2 gives the overall unemployment rate, revealing the seasonal fluctuations and long-term trends.

The unemployment trends are demarcated by three time periods. The first time period, from 1987 to 1990, shows a declining unemployment rate, with summer rates dropping below 10 percent. From that point until the spring of 1994, the unemployment rate kept climbing, surpassing 15 percent in the spring of 1993. Since then, the unemployment rate has again been declining, but not to the levels found in 1989 and 1990.

Figure 1-2

Nova Scotia unemployment rates by age group, 1987-1997



Source: Statistics Canada unpublished Labour Force Survey data (three-month moving averages)

It is well known that the employment context for youth has not been very positive recently. As Figure 1-2 shows, youth unemployment rates are consistently higher than adult rates. The unemployment rates for the three age groups fall either above (the youth groups) or below (the adult group) this overall rate. There is not a single exception to this pattern: the unemployment rates for both the 15- to 19-year-olds and the 20- to 24-year-olds are always higher than the average, and the unemployment rates for the adults are always lower than the average.

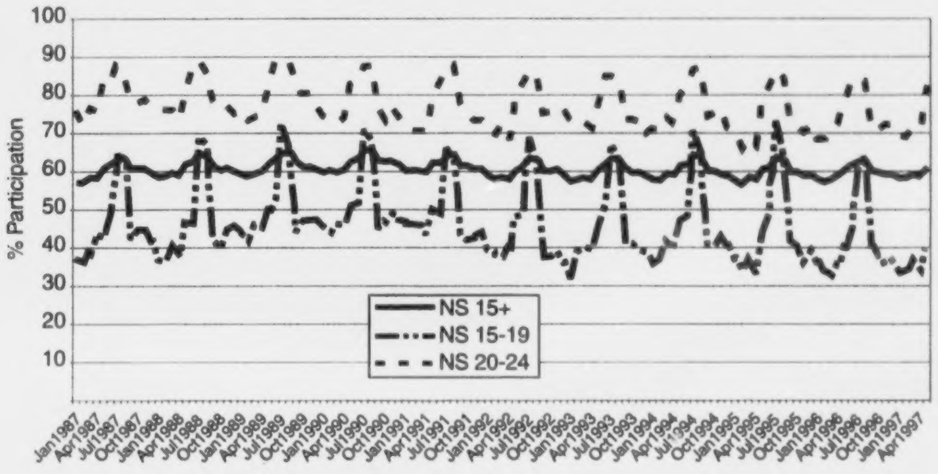
A second noteworthy point is the variability of youth unemployment rates. The valleys and peaks fluctuate substantially more for young people than for adults. Such fluctuations may represent another form of youth vulnerability in the labour market: they are the last hired and first fired. These patterns also suggest that youth employment is frequently seasonal and short term.

The unemployment rate of 15- to 19-year-olds does not show a consistent pattern with respect to the experiences of the 20- to 24-year-olds. Sometimes it is higher; other times lower. On average, it appears to be about the same.

The youth labour force participation rate (Figure 1-3) shows both the effects of seasonal employment and the effect of the school year. The seasonal rhythm, with high labour force participation during the summer months, is particularly pronounced for youth aged 15 to 19. Each summer, their labour force participation rate exceeds that for Nova Scotia as a whole; for the rest of the year, it is very low, reflecting the fact that many are back in high school and not working. From about 1989 to 1991, the non-summer teenage labour force participation rate exceeded 40 percent. This was a time when the economy was healthy, and more teenagers were working. Overall, these patterns underscore their greater vulnerability to economic conditions.

Figure 1-3

Nova Scotia labour force participation rates by age group, 1987-1997



Source: Statistics Canada unpublished Labour Force Survey data (three-month moving averages)

The labour force participation rate of youth over 19 is also markedly seasonal, but has been consistently higher than both the overall Nova Scotian and Canadian average over the past 11 years. Many of the 20- to 24-year-old youth are enrolled in a post-secondary educational institution. Their above-average labour force participation, even in winter months, speaks to the reality of having to combine education with work.

It is also important to note that the labour force participation rate in Nova Scotia is consistently about 5 to 8 percent below that of Canada as a whole, indicating the province's weaker economy.

Youth unemployment is sometimes better assessed in the context of overall unemployment. One way of doing that is to calculate the youth (15-24) to adult (25+) unemployment ratio. A ratio of 1.0 indicates that the youth rate is identical to the adult rate; a ratio of 2.0 implies that the youth unemployment rate is twice as high as the adult rate. The higher the ratio, the worse off the relative position of young people. Using Statistics Canada Labour Force Survey data for Nova Scotia, these ratios have, for the most part, varied between 1.5 and 2.5 over the past decade. As might be expected, they are usually higher during the spring and summer months when students are in the job market.

There is no indication that the relative position of youth with respect to employment has deteriorated in recent years. During the time of the NSSWT program (1995-1998), the ratio hovered between 1.5 and 2.0, lower than it was in the years immediately preceding.

Region and employment

Employment prospects in Nova Scotia vary by region. Proximity to Halifax, the capital of the province and its largest city, is an asset with respect to employment possibilities. Unemployment and participation rates from the Labour Force Survey are released at the sub-regional level. The boundaries of these sub-regions are highlighted on the map in Figure 1-1.

Some important aspects of youth labour market activity are revealed by comparing unemployment and participation rates of teenagers with those of young adults in different regions of Nova Scotia. Table 1-1 provides this information in the form of averages for 1996.

A comparison of the youth unemployment rates clearly reveals disparate opportunities. In the Cape Breton area, which includes the Sydney site, the teenage unemployment rate is twice as high as in Halifax County (32.8% versus 16.4%). The situation is even more disparate among the young adults aged 20 to 24 years (31.9% versus 12.0%, respectively). The youth unemployment rates in the remaining three regions are quite homogenous, ranging between 18.1 and 21.9 percent.

This table also shows that the unemployment rate among teenagers is hardly distinguishable from that of young adults. Except for Halifax County, the unemployment rate for these two age groups is within one percentage point of the other. In other words, among the under 25-year-olds, age is not a significant factor in determining the unemployment rate.

In contrast, age is a major factor in the labour force participation rate. Among 20- to 24-year-olds, the participation rate hovers around 75 percent, regardless of region. The participation rate of teenagers is substantially lower and more variable by region. It is particularly low in Cape Breton (27.8%) and especially high in Halifax County (48.8%).

Note also that among teenagers, but not young adults, there appears to be a connection between the participation and unemployment rates. Specifically, in regions such as Cape Breton, where the unemployment rate is high, the participation rate of teenagers is low. Conversely, in regions where the unemployment rate is low, such as in Halifax County, the teenage participation rate is high.

Table 1-1

Labour market activity of Nova Scotian youth by age and geographic area (1996)

	Unemployment Rate	Participation Rate
Cape Breton		
15-19 years	32.8	27.8
20-24 years	31.9	76.3
North Nova Scotia		
15-19 years	19.9	40.7
20-24 years	20.2	73.8
Annapolis Valley		
15-19 years	18.3	43.4
20-24 years	18.1	76.0
South Nova Scotia		
15-19 years	21.2	39.5
20-24 years	21.9	74.0
Halifax County		
15-19 years	16.4	48.8
20-24 years	12.0	74.7
Nova Scotia		
15-19 years	19.7	41.8
20-24 years	18.4	74.8

Source: Statistics Canada unpublished Labour Force Survey data

The negative relationship between the unemployment and participation rates among teenagers is consistent with the view that the state of the youth labour market has a bearing on teenagers leaving school. It is likely that a bleak labour market outlook acts as an inducement to remain in school. This interpretation has to remain a conjecture, however, since going to school and working are increasingly combined. Nevertheless, the fact that the negative relationship exists only among teenagers strengthens the conclusion that a healthy youth labour market may hasten an early exit from high school.

The Labour Force Survey data have two limitations with respect to the topic of youth employment patterns. The first is that the geographic regions are broader than the actual NSSWT sites. Second, the data are not available separately by gender. Tax-return data, on the other hand, have neither of these limitations. This source reveals several additional important factors about youth unemployment (Table 1-2).

First, the incidence of youth unemployment is gendered.[3] This pattern is one in which women under the age of 25 enjoy a lower incidence of unemployment than do young men. This is in striking contrast to the picture for the total labour force, where the incidence of female unemployment is, without exception, higher than the male. The sites reflect the gender pattern of the province as a whole, as well as those for the rest of Canada. The issue of gender differences in work and in education will be a focus of the analysis of outcomes reported in a later chapter.

Second, the youth unemployment incidence relative to the adult incidence is conditional on gender. The incidence of unemployment among young women is lower than among women generally. In the province as a whole, for example, the incidence is 7.4 percentage points lower (27.2%-19.8%) than for women on the whole. In contrast, among men the situation is reversed; in most instances, young men have higher incidence of unemployment than men generally. The only exception to this pattern is in Truro, where the unemployment incidence for young men is slightly lower than the overall male incidence in that site.

Table 1-2

1995 youth unemployment incidence by site and gender

	Youth (15-24)		All ages	
	Female %	Male %	Female %	Male %
Amherst	18.4	27.3	26.6	22.8
Halifax	14.4	17.2	20.1	17.0
Sydney	26.6	37.6	38.4	30.5
Pictou	18.9	29.9	29.2	22.9
Truro	16.5	18.1	22.1	18.9
Yarmouth	17.8	31.3	29.2	24.2
Nova Scotia	19.8	27.3	27.2	22.4
Canada	13.2	17.4	19.6	16.8

Note: The 1995 unemployment incidence was calculated as the percentage of the labour force participants in 1995 who received unemployment insurance benefits during that year (information based on tax returns).

Source: Statistics Canada 1995 Family Databank

Finally, it is important to note the incidence of youth unemployment by site is substantially more variable among young men than among young women. For example, on mainland Nova Scotia the incidence of unemployment among young women ranges from a low of 14.4 percent in Halifax to a high of 18.9 percent in Pictou. The figures for the young men in these two sites are 17.2 percent and 29.9 percent, respectively. Sydney, Pictou and Yarmouth young men are particularly likely to experience unemployment, while Halifax and Truro youth of either gender have low unemployment.

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[3] It can be argued that the measure of the incidence of unemployment used here is itself gendered. That is, young women may, for a variety of reasons, be less likely to claim unemployment insurance benefits than their male counterparts, even if equally entitled. This would make them appear to have a lower incidence of unemployment. It is not known to what extent, if any, that this is so.

In short, the likelihood of young men experiencing unemployment is particularly high, relative to both young women and adult males. The implication is that young men have to reckon with prospects of varying lengths of unemployment.

One way of looking at these gender differences is in terms of the likely immediate versus longer-term outcomes. For young men to join the labour force carries with it a substantial likelihood of experiencing unemployment. However, the longer-term consequence, assuming that the age- and gender-related structure of work experiences does not change, may not be particularly severe. For young women, the reverse seems to be the case; the immediate consequence may not be particularly severe, but the longer-term implication may be. Of course, it remains unknown whether the long-term age and gender structure of work opportunities will remain as they are today.

Skills, education and employment

If the educational requirements of recently created jobs are any guide, it is imperative that young people obtain some form of post-secondary education. Statistics Canada/APEC figures indicate that in the five-year period between 1991 and 1996, a total of 35,600 new jobs were created for Nova Scotian workers having post-secondary education. Strikingly, this was almost totally counterbalanced by the elimination of 32,500 jobs for those not having any post-secondary education (NovaKnowledge 1998:10). This has profound implications for any school-to-work transition program. It underscores that successful transitions to work usually hinge on formal education or training beyond high school.

The distribution of existing and projected jobs by skill level reveals some important features of the Nova Scotia labour market (Table 1-3).[4] Note that greater growth is

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[4] Economists at HRDC in Halifax projected the growth/decline of most occupations in Nova Scotia on the basis of recent trends and knowledge of current or impending events likely to affect job creation/closure. For further information, see Human Resources Development Canada (1997a).

Table 1-3

Expected job growth in Nova Scotia by skill level

	Number of jobs in 1996	Expected number of jobs in 2002	Expected growth rate (%)
Senior Managers	2,700	2,790	3.3
Middle & Other Managers	33,660	35,950	6.8
Professionals (Skill Level A)	53,570	55,770	4.1
Semi-professionals & Technicians	23,770	25,240	6.2
Supervisors – Clerical Sales & Service	6,360	6,500	2.2
Supervisors – Manufacturing, Processing, Trades & Primary Industries	11,160	11,320	1.4
Administrative & Senior Clerical	21,130	21,280	0.7
Sales & Service (Skill Level B)	19,210	20,640	7.4
Skilled Crafts & Trades (Skill Level B)	30,410	31,490	3.6
Clerical Workers (Skill Level C)	36,300	36,130	-0.5
Sales & Service (Skill Level C)	51,730	55,010	6.3
Semi-skilled Manual Workers (Skill Level C)	39,430	40,830	3.6
Sales & Service (Skill Level D)	39,040	40,740	4.4
Other Manual Workers (Skill Level D)	13,550	14,100	4.1
Total	384,016	399,792	3.8

SKILL LEVEL A: University degree (Bachelor's, Master's or post-graduate). SKILL LEVEL B: Two to three years of post-secondary education at community college, institute of technology or CEGEP, or two to four years of apprenticeship training or three to four years of secondary school and more than two years of on-the-job training, training courses or specific work experience. Occupations with supervisory responsibility are assigned to this skill level. Occupations with significant health and safety responsibilities (e.g. fire fighters, police officers and registered nursing assistants) are assigned to this skill level. SKILL LEVEL C: One to four years of secondary school education. Up to two years of on-the-job training, training courses or specific work experience. SKILL LEVEL D: Up to two years of secondary school and short work demonstrations or on-the-job training.

Source: Constructed from information provided by HRDC Nova Scotia Regional Office

projected for higher skill levels. One important trend is the stagnation/decline of clerical work. Second is the bifurcation of the labour market. High-level jobs, particularly those of middle managers, professionals, semi-professionals and technicians, are expected to grow rapidly. The middle levels – supervisory, administrative and senior clerical positions – are projected to grow the least. Finally, growth of sales and service at all skill levels (except supervisory personnel) is forecast: 7.4 percent, 6.3 percent and 4.4 percent for skilled, semi-skilled and unskilled jobs, respectively.

Finding jobs

To obtain good jobs, young adults will need to develop effective job-search strategies and abilities (e.g. using a variety of sources), in addition to completing an appropriate education. Lower skilled jobs predominate for example in easily accessible job postings and newspapers. This can be seen by looking at the type of job openings listed with Nova Scotia Human Resource Development Canada (HRDC) employment offices. In 1996, almost two thirds of such job openings (65.9%) were at skill level C or lower.[5] These are not the types of jobs that the young people in the NSSWT program want (Thiessen 1996; Thiessen 1997b). They are aiming primarily for professional, technical and managerial jobs, which are much less likely to be listed with an HRDC employment centre.[6]

To obtain a professional, technical or managerial type of job, even when fully qualified for such a job, requires substantially more complicated job-search strategies than simply dropping into a regional employment centre. This conclusion is strongly reinforced when looking at the most frequently occurring job titles in the HRDC postings for Nova Scotia, which are given in Table 1-4. The most frequently listed job openings are at relatively low-skill levels, such as *Construction Trade Helpers and Labourers, Retail Salesperson and Sales Clerks, Babysitters, Nannies and Parents' Helpers.* In addition to the low skill level, many listings suggest short-term and seasonal employment. For example, many of the *Harvesting Labourer, Landscape and Grounds Maintenance Labourers, General Farm Workers* and *Construction Trades Helpers and Labourers* are likely to be seasonal. Jobs with potential[7] are strikingly absent from this list. To the extent that such jobs are available, they will require more sophisticated job-search strategies.

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[5] This figure was calculated from information about job openings provided by HRDC.

[6] It should, however, be noted that HRDC offers a number of services and information products designed to connect individuals to work opportunities and to provide them with labour market information. Job Futures provides detailed information on current labour market conditions, future occupational trends and graduates' career outlooks. A number of web sites provide other labour market information (e.g. Job Bank, a listing of available jobs across Canada and Electronic Labour Exchange, an employer-employee matching system).

[7] Jobs with potential are not only high prestige, managerial or professional-type jobs but also those jobs that require a high level of skill and for which there is a high likelihood of finding employment. For further discussion of this concept, see Chapter 4.

Table 1-4

Most frequent job openings reported to HRDC Nova Scotia regional offices in 1996

Job Title	Number
Construction Trades Helpers and Labourers	975
Retail Salespersons and Sales Clerks	940
Babysitters, Nannies and Parents' Helpers	769
Cooks	632
Other Elemental Sales Occupations	572
Cashiers	492
General Farm Workers	487
Food and Beverage Servers	455
Carpenters	436
Landscaping and Grounds Maintenance Labourers	408
Light Duty Cleaners	380
Harvesting Labourers	346
Kitchen and Food Service Helpers	325
General Office Clerks	313
Chainsaw and Skidder Operators	299
Food Service Counter Attendants and Food Preparers	282
Painters and Decorators	279
Janitors, Caretakers and Building Superintendents	246
Sales Representatives, Wholesale Trade (non-technical)	246
Secretaries (except Legal and Medical)	241
Visiting Homemakers, Housekeepers and Related Occupations	239
Truck Drivers	225
Program Leaders and Instructors in Recreation and Sport	221
Delivery Drivers	218
Nurse Aides and Orderlies	217
Material Handlers	197
Receptionists and Switchboard Operators	193
Fish Plant Workers	185
Community and Social Service Workers	170
Motor Vehicle Mechanics, Technicians and Mechanical Repairer	161
Public Works and Maintenance Labourers	152
Early Childhood Educators	142
Customer Service, Information and Related Clerks	122
Maîtres D'hôtel and Hosts/hostesses	118
Survey Interviewers and Statistical Clerks	114
Hairstylists and Barbers	104
Attendants in Recreation and Sport	101
Professional Occupations in Public Relations & Communications	100

Source: HRDC Nova Scotia regional office

Popular perception seldom keeps abreast of rapid technological change, as noted by Ogburn (1957), the American economist, more than three quarters of a century ago. This is certainly true with respect to the make-up of Nova Scotia's economy, popularly believed to be resource-based. And indeed it was; in 1911, over half the jobs in the province were found in this sector. This decreased to about 3 in 10 (29%) by 1951 and to just 6 percent today (the above information is based on Statistics Canada/APEC data and appears in NovaKnowledge 1998:5). Yet 3 in 10 Nova Scotians currently believe that the resource sector is the most important (NovaKnowledge 1998:5), a view that would have been appropriate about half a century ago. But, as is well known, what is perceived as real has real consequences. Parents likely advise their adolescent children, and these youth may make decisions, based on information that is no longer accurate.

Educational context

Before looking at the specific school sites, several features of the educational context of Nova Scotia, which have implications for any school-to-work program, need to be reviewed. The Nova Scotia educational system divides public education into three levels: elementary (kindergarten-Grade 6), junior high (Grade 7-9) and senior high (Grade 10-12). Full-time education is compulsory to age 16.

Successful completion of high school ordinarily serves as the minimum prerequisite for admission to one of Nova Scotia's community colleges. The province's community college system has recently undergone substantial restructuring. There are now 18 community college campuses spread throughout the province.[8] In 1995, they offered 135 programs which 4,255 students successfully completed (Nova Scotia Department of Education and Culture 1997). Business Information and Technology, with 530 graduates, was by far the most popular program. A variety of traditional vocational programs were also popular, with Office Administrative/Secretarial (281 graduates), Nursing Assistant (205 graduates), Motor Vehicle Repair (178 graduates), Cosmetology (172 graduates) and carpentry (165 graduates) leading the way.

In a one-year follow-up of the 1995 graduates of Nova Scotia community colleges, just under one quarter (24.6%) were unemployed, and another 6.8 percent were not in the labour force during the reference week of June 23-29, 1996 (Nova Scotia Department of Education and Culture 1997:12).

Despite its relatively small size, Nova Scotia currently boasts 11 degree-granting institutions.[9] In 1995, a total of 7,282 students graduated from these institutions.

The employment prospects of university graduates, at least in the short term, appear substantially brighter than those of graduates of community colleges in Nova Scotia. In the same reference week as that used for the community college graduates, only 9 percent of 1995 university graduates were unemployed and 8 percent were not in the labour market approximately one year after graduation (Maritime Provinces Higher Education Commission 1996:23).

The distinct advantage of university over community college in this respect, however, seems to dissipate substantially over time. For example, the five-year follow-up of 1990 graduates shows the unemployment rate in Nova Scotia of college graduates to be just one percent higher than that of their university-educated counterparts (9% and 8%, respectively) (Human Resources Development Canada and Statistics Canada 1997:10).

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[8] Additionally, in Cape Breton some programs are delivered through the Trades and Technical Faculty of the University College of Cape Breton and the high school-based Memorial Composite.

[9] In 1995, there were 12 universities in Nova Scotia, but the Technical University of Nova Scotia has since merged with Dalhousie University.

The remainder of this section provides a brief statistical summary of the Nova Scotia public school system, with particular emphasis on the senior high school.[10]

In the 1996-97 school year, 163,941 students were enrolled in 461 schools and were taught by 9,384 full-time equivalent teachers. Over the past decade and a half, each of these figures declined steadily. Between 1982 and 1996, enrolments dropped by 8.6 percent, the number of schools by 20.5 percent and full-time equivalent teachers by 13.5 percent.

Since both enrolments and teaching staff size declined, the net impact on average class size has been moderate. The pupil-teacher ratio is one student more per teacher today than it was 15 years ago. The average teaching class size in elementary, junior and senior high school is quite similar, in the vicinity of 24 students per class, although junior high school classes tend to be slightly smaller than those in either elementary or senior high school. Over the past decade, average class sizes have increased from 22.2 to 23.7 students per class.

Figure 1-4 shows the historical trends in enrolments by school level. Enrolments in elementary school peaked at over 120,000 pupils around 1970, dropped precipitously over the next two decades to about 90,000 and continued to decline slowly to the present enrolment of about 80,000. As would be expected demographically, junior high school enrolments peaked about five years later than that of elementary enrolments, reaching a high of about 55,000 students in 1975. From that point forward the decline is gentle but continuous. The senior high school population peaked in 1980. In contrast to the other school levels, the high school enrolment has remained essentially flat and stable at approximately 40,000 students from 1980 until today. In light of the fact that the elementary and junior high school populations, which feed the senior high schools, declined, this implies that a higher proportion of students remained in, or returned to, senior high school.

Nova Scotia is graduating more students with a high school completion certificate. Between 1982 and 1995, about 20 percent more students enrolled in Grade 12 with

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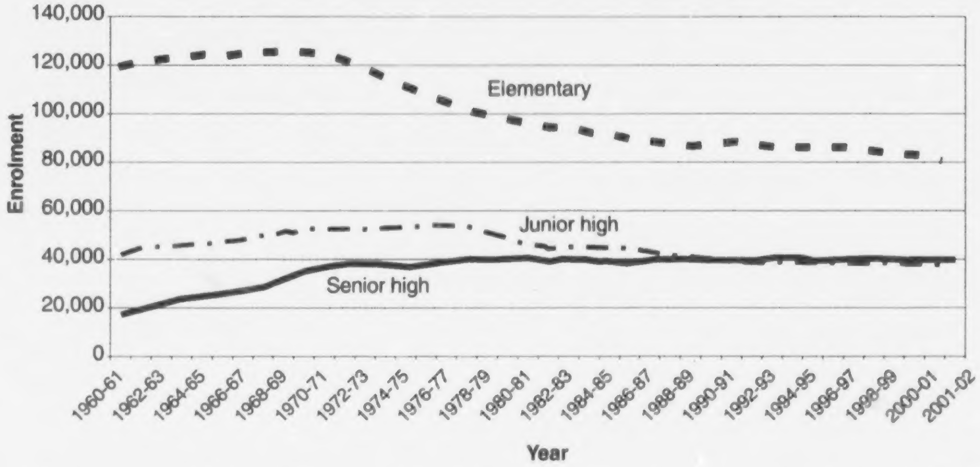
[10] Except as otherwise noted, the statistics provided in the remainder of this chapter were supplied by the Nova Scotia Department of Education and Culture, Statistics and Data Entry Section (1996b).

Figure 1-4

Nova Scotia elementary, junior and senior high school enrolments and projected enrolments, 1960-2002



Source: Information supplied by Nova Scotia Department of Education and Culture, Statistics and Data Entry Section

sufficient credits to be eligible to graduate at the end of the year, and did indeed graduate (not shown). Currently, about three in every four eligible students graduate.[11]

Over the past 16 years, there has been an irregular but nevertheless discernible increase in the senior high school withdrawal rate (see Figure 1-5). This is the case for both males and females.

Notice the dips in the rates, occurring in 1982-83, 1986-87 and 1991-92. As mentioned before, these correspond roughly with downturns in the Nova Scotia economy, with higher withdrawal rates during periods of economic recovery and lower withdrawal rates during economic stagnation. Those dips suggest that the decision to continue one's education is affected by more than just a desire to gain higher qualifications. It reflects a delicate balance between this desire, the family's financial situation and labour market (dis)incentives.

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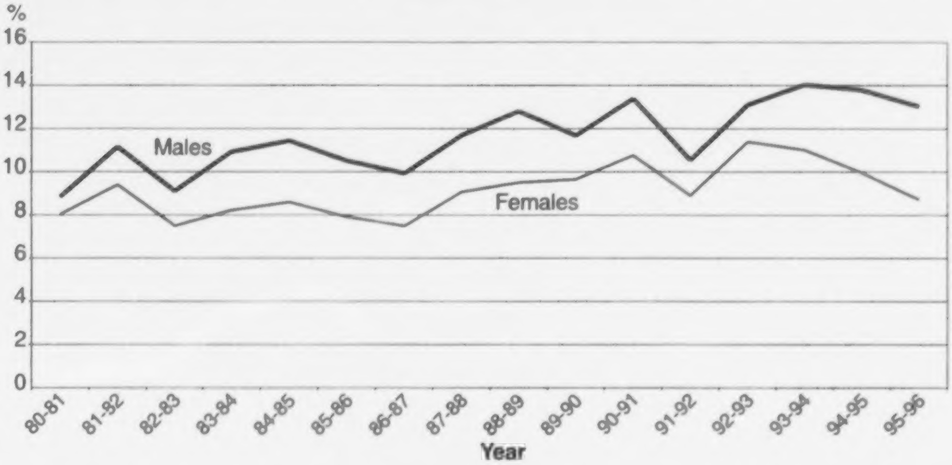
[11] The percentage of young adults in Nova Scotia who ultimately obtain a high school completion certificate is estimated to be approximately 10 percent higher, since about one quarter of high school leavers subsequently return to complete high school.

Figure 1-5

Nova Scotia senior high school withdrawal rates by gender, 1980-1996



Note: The senior high school withdrawal rate is defined as the number of Grade 10, Grade 11 and Grade 12 students who withdrew from school as a percentage of the number of students who were enrolled in these grades.

Source: Information supplied by Nova Scotia Department of Education and Culture, Statistics and Data Entry Section

Although high school withdrawal rates have increased somewhat over the past decade, this does not necessarily translate into lower numbers of young people attending school. This is because many students who leave school subsequently re-enter.

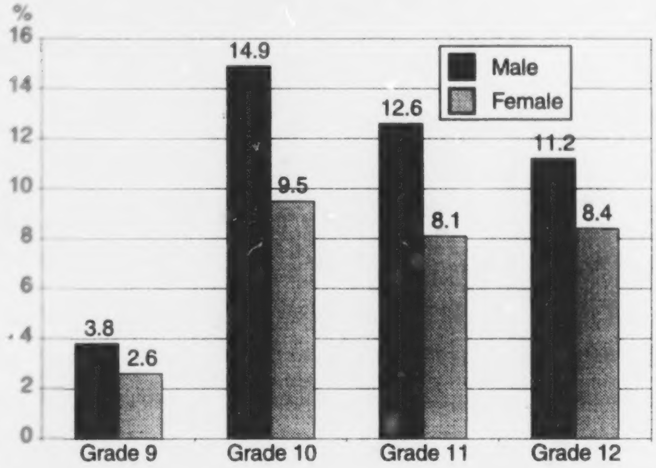
The grade- and gender-specific withdrawal rates are given in Figure 1-6. The first thing to note is that the risk of leaving school is highest in Grade 10. The huge jump in dropout rates between Grade 9 and Grade 10 is probably primarily due to many students having reached the age of 16, at which point they are no longer legally required to attend school. But part of the increase is probably also due to the stresses involved in the transition from junior high to senior high school, which for many students involves transferring to a different school. The same figure also shows that adolescent males are substantially more likely than females to withdraw from school in each grade.

The gender difference in leaving school is particularly pronounced in Nova Scotia, with more than twice the proportion of 20-year-old males than females having left school (29% and 13%, respectively) (Gilbert, Barr et al. 1993).

School context

Figure 1-6

1995-96 withdrawal rates by gender, Grades 9 through 12



Note: The withdrawal rate is defined as the number of students who withdrew from school in a given grade, as a percentage of the number of students who were enrolled in that grade.

Source: Information supplied by Nova Scotia Department of Education and Culture, Statistics and Data Entry Section

As stated earlier, the NSSWT program was implemented in six sites. In two sites, students drawn from more than one school participated in the program. In this section, the characteristics of the schools are highlighted and compared to the provincial average. This information will help show in what ways the participating schools are representative of others in Nova Scotia. Individual school characteristics may also moderate the effect of the NSSWT program. Some schools in Nova Scotia serve only one of the three levels (elementary, junior high or senior high) in their building, some serve two of the three levels, while others house all three levels together. This reflects more than whether the region is rural or urban, since bussing of students makes it possible for rural regions to have consolidated schools serving just one level. The Pictou site differs from all the others in that two of the Pictou site schools (Pictou Academy and Stellarton High) have students at all three levels. In the Pictou and the Amherst sites, none of the schools is only senior high school. All participating schools in the other sites are dedicated exclusively to senior high students.

On average, class size in the participating schools closely mirrors that of the province. There is some indication that class sizes above 30 are over-represented in the participating sites (23% for participating sites versus 19% provincially), and under-represented in the very small (up to 10 students) class sizes (2% in participating schools; 5% provincially).

The site average masks sizeable variations in class sizes between participating schools. Pictou Academy, Trenton High and Westville High, in the Pictou site, have smaller-than-average class sizes. In contrast, Millwood High and Sackville High, in the Halifax site, have a higher percentage of classes with more than 30 students. This is not due to increasing enrolments since enrolments are stable in Millwood High and declining in Sackville High. Memorial High in Sydney also has above-average class sizes despite its declining enrolment.

To summarize, the students in the participating sites are taught in classes that do not differ dramatically in class size from those characterizing the rest of the province, although there are appreciable variations in class size between the different participating schools.

Despite the high withdrawal rates of males noted earlier (see Figure 1-6), the gender ratio in senior high school favours males slightly over females (52:48 in Grade 10, and 51:49 in both Grades 11 and 12 (not shown)). This is probably due to more males returning to high school after having withdrawn and to a greater likelihood of them repeating a grade. Information from the Statistical Summary, 1995-96, Nova Scotia Department of Education and Culture, shows that a substantially higher percentage of boys than girls are above age for their grade.

Taken together, the graduation rates of the participating schools are quite similar to the provincial average, although they range from two to six percent below that average.[12] On the other hand, participating schools have experienced an increase in graduation rates between 1992 and 1996 that is almost double the provincial increase (9 percentage points for participating schools compared to 5 percentage points provincially).

It is worth highlighting recent graduation rates for the participating schools. Table 1-5 gives the names of the participating schools for each of the sites and the graduation rates since 1992-1993.[13] For the Pictou site, both West and East Pictou High have consistently had exceptionally high graduation rates, usually upwards of 90 percent. Westville High has caught up with these two schools, starting with a 74 percent graduation rate in 1992-93 and steadily increasing this to 99 percent by 1995-96. The remaining sites show irregular fluctuations, due most likely to the small numbers of

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[12] The definition of graduation rates used here is the percentage of students enrolled in Grade 12 who successfully completed graduation requirements at the end of that year.

[13] As is clear from the table, multiple schools were involved in the program in two of the sites (Halifax and Pictou). Additional features of the participating schools are given in Chapter 2.

Grade 12 students involved. Of the four schools comprising the Halifax site, Millwood High shows consistently high graduation rates, while Sackville High has shown the greatest improvement, jumping from 70 percent to 87 percent between the 1994-95 and 1995-96 school years. Cole Harbour High appears to be struggling; it is the only participating school in which there is clear evidence of a decline in the graduation rate. Indeed, it has a substantially lower graduation rate than any of the other participating schools. (Information for Auburn Drive High is not given since it only opened in 1994-95.) The Truro site also showed substantial improvement. It started with the second-lowest graduation rate of any participating school (66% in 1992-93) and ended with a rate slightly above average for the participating schools. Memorial High is remarkable for the variability in its graduation rate, starting at 65 percent, rising rapidly

Table 1-5

Graduation rates by site and year

Site	Graduation rates			
	1992-1993	1993-1994	1994-1995	1995-1996
Pictou				
East Pictou High	89	95	91	95
New Glasgow High	80	91	86	82
Pictou Academy	88	72	93	85
Stellarton High	84	71	89	99
Trenton High	73	86	100	86
West Pictou High	94	82	94	98
Westville High	74	85	89	99
Halifax				
Auburn Drive High	*	*	*	*
Cole Harbour High	77	84	70	65
Millwood High	88	96	84	85
Sackville High	70	73	70	87
Truro				
Cobequid Education Centre	66	73	86	84
Sydney				
Memorial High	65	90	94	74
Yarmouth				
Yarmouth High	78	81	100	91
Amherst				
Amherst High	79	72	85	83
Total for sites	75	82	83	84
Provincial Total	81	85	85	86

* Data not available

Note: The graduation rate is defined as the number of students who graduated with a Grade 12 certificate as a percentage of the number of students in Grade 12 who were eligible to graduate.

Source: Information supplied by Nova Scotia Department of Education and Culture, Statistics and Data Entry Section to 90 percent and 94 percent, and then dropping by 20 percentage points the following year to 74 percent. The Yarmouth site has consistently had an above average graduation rate, and has shown particularly high graduation rates in the past two years. Finally, the Amherst site produces a fairly steady and approximately average graduation rate.

Context summary

This section placed the NSSWT program into its historic, regional, economic and educational contexts. In the economic arena, this section showed that, as is true in many other countries, employment prospects for youth in Canada are gloomier than for adults. In recent years these prospects have worsened. Not only is youth's unemployment rate about double that of the adult rate, their employment is less secure and likely to be more temporary. Youth's employment prospects, like those of adults, are regionally distributed, reflecting to some extent a rural-urban factor. Employment opportunities in or near large urban centres, such as Halifax and to a lesser extent Truro, are relatively bright. In contrast, rural economies, and especially that of Cape Breton Island, are stagnant.

Employment has a gender dimension. The incidence of unemployment among young women is less than that of young men. In fact, it is even lower than that of adults of either gender. For adults, this situation is reversed, with women more likely to experience unemployment than men.

The labour force participation rate for teenagers is quite low, indicative of the high proportion enrolled in school. Young adults aged 20 to 24 participate in the labour market to an above-average extent, despite the fact that a high proportion of this age group is enrolled in post-secondary educational institutions. Such extensive labour force participation probably reflects the necessity of young people having to work in order to pursue post-secondary education.

Emerging evidence suggests a division of the Nova Scotian labour market into jobs with, and without, potential. It is the latter that are most likely to be listed with easily accessible sources.

The changing shape of the population pyramid and declining family size have manifested themselves in the diminishing student population of the past two decades. Only the senior high school population has not declined, most likely due in large part to an increasing number of young people returning to school.

High school withdrawal rates have shown no decline in the recent past; instead, there appears to have been a small increase in this rate. Leaving school is highest in Grade 10. In all grades, young men are more prone than young women to withdraw from school. Withdrawal rates appear to be sensitive to economic downturns, since during such times the withdrawal rate is lower. In contrast, high school graduation rates have climbed steadily over the past 15 years as more students stay in school and/or return to school to obtain their high school completion certificate.

The factors cited in this section have important implications for the design and functioning of school-to-work transition programs. The next section considers the different types of responses that have been designed to deal with these issues.

Responses

The interest in school-to-work transitions can be traced to the increasingly poor prospects for youth in the labour market. High youth unemployment rates have received the attention of the media. Less publicized, but perhaps equally problematic, is the "disappearance" of youth. A rising proportion of young people appear to simply vanish; they are neither enrolled in school nor are they in the labour market.

A second factor is the increased complexity of labour market issues. To make informed career choices requires young people to access and digest more information than ever before. The pace at which technology changes means that to be competitive young people must have a stock of transferable skills. The notion of a single career trajectory is increasingly removed from contemporary life. To become aware of one's skills and to augment them is thought to be a prerequisite for successful school-to-work transitions.

The *school-to-work transition period* is the time between the end of compulsory education and the point in time when the principal activity is employment or self-employment. The use of the term *school-to-work transition* has mushroomed in the past two decades. The extent of the problem was such that the Organisation for Economic Co-operation and Development (OECD) held a major high-level conference, in 1977, focusing on youth employment, which was becoming a serious issue in all of its member countries.

Transitions to work and adulthood are less orderly, more complex, more reversible and less clear-cut than in the past (Looker and Dwyer 1998). A half century ago, it was not unreasonable to think of youth transitions as following a normative order: finish school, enter the labour market, get married, have children. Today, the sequences of these events are richly varied and without strong normative sanctions. Although that has its advantages, it also makes transitions more problematic. In Canada, as in many other industrialized countries, transitions to full-time work take longer than even a decade ago. To permit comparisons over time and across nations, the OECD defined, for the societal level, the school-to-work transition period as "commencing in the first year of age at which fewer than 75 percent of the population are in education, and as ending in the first year of age at which 50 percent of the population are in the work force but not in education" (Human Resources Development Canada 1998:8). By this definition, the transition period lasted two years longer in 1994 (age 16 to 23) than it did a decade earlier (when it was age 16 to 21). A positive trend – increased youth participation in post-secondary education – accounts for part of the delay in the transition to work. Nevertheless, the persistence of school-to-work transition difficulties is evidenced by the fact that the OECD organized another conference in 1999, "Preparing Youth for the 21st Century." This conference clearly signalled that the labour market problems of young people are far from over.

In response to increased transition difficulties for youth, many countries introduced new programs, or modified existing approaches, aimed at facilitating youth's initiation into stable, full-time employment. The next section sketches some of the approaches intended to increase either the demand for young workers or to raise the job skills of youth who are no longer students. This is followed by a description of programs designed to better prepare students, in either secondary or post-secondary institutions, for their ultimate transition to work. Of course, high schools differ widely in the work-related programs they offer. For this reason, the specific work experience courses available at the participating NSSWT schools are described next. Finally, in the backdrop of these other programs, the overall parameters and objectives of the NSSWT program will then be presented.

Non-student programs[14]

Low minimum wage for youth

Setting a lower minimum wage for youth than for adults is a popular approach to mitigating youth transition difficulties in some OECD countries, especially in conjunction with apprenticeship programs. This route is not popular in Canada; currently only one province, Ontario, sets a lower minimum wage for youth. Nova Scotia has a special minimum wage, applicable only to inexperienced workers during the first three months of their employment. In both provinces, these youth minimum wages are at least 90 percent of the adult rate.

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[14] Except where otherwise noted, information on the Canadian programs is taken from Marquardt (1998) and Human Resources Development Canada (1998).

Tax incentives/wage subsidies

Tax incentives, and especially wage subsidies, are also used in Canada. Ontario's Co-operative Education Tax Credit offers businesses a credit of approximately 10 percent of the wages and benefits for post-secondary co-op placements (15 percent for small businesses). The same credit (but known as the Graduate Transitions Tax Credit) is given for hiring unemployed and underemployed workers who graduated from a post-secondary educational institution within three years. Also, the federal government recently eliminated the employer-paid portion of Employment Insurance premiums on new jobs created for 18- to 24-year-old Canadians.

Both a lower minimum wage for youth, as well as tax incentives and wage subsidies, focus on making it more attractive for employers to hire young people. For the last several decades, programs aimed at increasing the demand for young workers in Canada have become less pronounced than those aimed at increasing the human capital of youth.

Youth internship

One such program is the youth internship program. Typically, interns are unemployed high school, college or university graduates who are placed with employers for up to one year. The objectives of internships are to enhance generic skills, provide career-relevant work experience, and encourage and assist in entrepreneurial activities. In the 1990s, the federal government augmented internships with the *Youth Internship Canada* and the *Youth Services Canada* programs. Both of these programs, which are funded by HRDC, encourage partnership with private and voluntary sectors. Together, more than 30,000 youth participated in these programs in 1997-98 (Human Resources Development Canada 1998). The latter program, with over 5,000 participants in 1997-98, targets youth facing serious barriers to employment. The program works in concert with community organizations and groups to create meaningful work experience in local community projects.

Some provinces also sponsor internships. In Manitoba, for example, the *Partners for Careers* program attempts to match Aboriginal high school, college and university graduates with career opportunities. In partnership with business, Aboriginal leaders and the federal government, the program provides industry mentors for youth and entry-level jobs in the private sector.

Entrepreneurship

Programs to encourage self-employment and enterprising innovation are aimed primarily at youth who are not in school. These programs usually provide skills training, and seed capital for starting their own ventures.

Student programs

In contrast to the programs just described, many programs target young people while they are still students. Most of these include both an in-school component, as well as employment, or some form of work experience.

Youth apprenticeship

Youth apprenticeship training combines school with work in a designated trade. Such an approach is effective in countries that have defined national industry skill standards and tests for the trades, developed strong institutional links with business and trade unions, and created incentives to businesses, such as lower wages to apprentices, to provide the requisite training. In Canada these characteristics are embryonic. Apprenticeship standards are under provincial jurisdiction, with the federal role in youth apprenticeship programs currently geared to providing the necessary infrastructure through Sector Councils (standards, examinations and labour market information). Given Canada's open labour market, relatively few occupations require licensing. Although hundreds of apprenticeship trades exist in one province or another, interprovincial standards have been agreed on for only 44 of them (Human Resources Development Canada 1998:18).

Given the heavy concentration of apprenticeship in the traditional trades in which there has been weak job growth, it is perhaps not surprising that enrolments in such programs are on the decline (160,000 versus 130,000 in 1990 and 1995, respectively).

For most Canadian apprentices, this is not a school-to-work pathway, since on average they have been out of high school for eight years. Their average age at the beginning of apprenticeship is 27 and over half of them had held at least three prior jobs (Stoll and Baignee 1997). In Nova Scotia, apprenticeship programs typically last for four years. In 1996, 46 trades had a designated apprenticeship status. Of these, just over half (25 trades) include an in-class training component (Nova Scotia Department of Education and Culture 1996a:245). These are provided by the Nova Scotia community colleges, and last from four to eight weeks per year. To become an apprentice, it is first necessary for the applicant to obtain a job with a suitable employer. Wages range from 40 to 90 percent of the shop's current journeyman wage rate.

Apprenticeship as a high school option exists primarily in the western and central provinces: British Columbia, Alberta, Manitoba, Ontario and the Northwest Territories. These programs are designed to provide an early path into an apprenticed trade. To be eligible, participants must be at least 16 years old and must continue to take at least three academic credits per year. Students must still complete all the usual high school requirements to obtain their high school graduation certificate. To keep this pathway flexible, students are allowed to return to a regular high school program after a trial period (usually one semester) without penalty.

Apprenticeship programs in the eastern provinces are heading in a new direction. The New Brunswick Youth Apprenticeship Program (NBYAP) involves high school students in a three-year program in which they can apprentice careers that have traditionally been outside the realm of apprenticeship programs. Some of the career areas included have been office management, marine biology, human resources, veterinary medicine and hotel management. Local businesses and organizations create paid summer positions for the students in this program. There is a direct link between this program and the province's post-secondary institutions: apprentices are guaranteed acceptance to the province's community college system or to the University of New Brunswick.

Vocational education

As a high school-based option, vocational education has been declining steadily over the past 30 years. Many factors contribute to this decline, not the least of which is the rising post-secondary aspirations of young people. Also, many vocational programs have moved out of high school and into community colleges. This has been the approach taken in Nova Scotia since 1988. Nevertheless, many high schools, including some of those participating in the NSSWT program, continue to offer some vocational programs.

Entrepreneurship

Some entrepreneurship programs are also available as a high school option. The *Centre for Entrepreneurship Education and Development* in Nova Scotia, for example, offers two credit programs for high school students. One of them is the full-credit course "Entrepreneurship: A Way of Life" which is described as "an outcome-based curriculum that focuses on active, experiential learning and develops the attitudes, skills, and knowledge required to be a successful entrepreneur."[15] In the 1997-98 school year, over 1,800 students from 59 schools registered in this course. The second program for high school students is the recently established *Entrepreneurship Venture Centres.* In this program, students "start their own businesses while earning full academic credits through self-directed study using a fully-integrated curriculum." This is done under the instruction of a full-time teacher. One of these centres is expected to be established, in the near future in Yarmouth, one of the sites participating in the NSSWT program.

A non-credit program, the Youth Entrepreneurial Skills Program for Students, provides loans of $2,000 to secondary and post-secondary students to start a summer business. Students are expected to return to school.

Cooperative education programs

In Canada, cooperative education programs exist at both the high school and the post-secondary level. At the high school level, these programs are intended to familiarize students with the work environment of their chosen field. These programs are based on the principle that learning is facilitated by its application to concrete problems. However, it is estimated that less than 10 percent of high school students choose to participate in cooperative education (Crysdale and MacKay 1994). This may be due to the fact that the cooperative education credit is usually not counted for admission into post-secondary programs. At the post-secondary level though, the demand for cooperative education is growing.

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[15] Information on the *Centre for Entrepreneurship Education and Development* is taken from their unpublished brochures.

Summer student jobs

Increasing the number of summer jobs for students spans both demand- and supply-side factors. Such employment possibilities *help students finance their education,* while wage subsidies make it more attractive to employers to hire them. At the federal level, the *Summer Student Job Action program* creates summer work for students in partnership with private and not-for-profit organizations. In 1997-98, over 63,000 students obtained summer employment through this program (Human Resources Development Canada 1998).

Other in-school programs

Nova Scotia also provides a range of work experience and job-shadowing possibilities within the secondary school system. Job shadowing is a "short term segment of a program" consisting of a student "observing or 'shadowing' someone in a work situation as part of his/her career or work education development" (Nova Scotia Department of Education and Culture 1998:B-17). Typically, job shadowing is "of very short duration, usually one day or at most a few days spread over the school year" (p. B-17). Such job shadowing can be developed by individual schools or teachers, and need not have formal approval from the Department of Education and Culture.

Work experience programs, on the other hand, *do* require formal approval. While these programs must involve direct experience on a job, such experience must be made available in conjunction with an in-school course. The department sets formal guidelines about how these courses can be offered and who is eligible to take them (e.g. students must be at least 16 years of age, and must have written parental permission before becoming involved in any work experience program.)

NSSWT is one such program that was introduced in 1995. The next section reviews other work experience programs available in the sites where the NSSWT program was offered.

Work experience courses available at the NSSWT schools

The six sites differed substantially in the number and variety of programs and classes relevant to work preparation that were offered in their schools. It is important to point out, however, that the NSSWT program is a substantially more intensive work experience program than any other program currently offered in the province. Three of the sites – Amherst, Halifax and Sydney – had an established co-op program. The co-op program is intended to match students' career interests with work placements in the context of a specific high school class. According to school officials, participants in the co-op program are screened for maturity and academic performance. Since it is linked to a high school class, it is generally assumed that the participants will pursue some form of post-secondary education that is appropriate for entry to a career related to that subject.

The structure of the co-op program is quite similar to that of the NSSWT program, comprising both a classroom component of at least of 40 hours and a minimum of 120 hours in a work placement. That is, within a given school year, the co-op program is comparable in content and structure to the NSSWT program. In contrast, however, the co-op program is a one-year program, which can be taken in either Grade 11 or Grade 12. School officials report that between 20 and 25 students are accepted into the program in each of the schools.

A Business Education program is available in Amherst, Truro, Yarmouth and two of the Halifax site schools. This program, which has a two- to three-week work placement component, can be taken in Grade 12 and counts as a credit toward a high school completion certificate. This program includes courses in business English, word processing, accounting, data management and business personnel development. It is open to both adult students and students who have already completed high school but want to prepare for office-type work. School officials estimate that up to 25 percent of participants are adult or returning students. Between 20 and 40 students per school take the Business Education program.

These are the only available programs that provide both an actual work placement and a high school credit. All other work preparatory programs either are not eligible for high school credit, or else do not involve an actual work placement. For example, the Truro site offers a work experience program for students in senior high school who are at least two years behind their age group. Such students, who would not normally complete high school, spend 20 hours in a work placement in Grade 10, and 30 and 40 hours, respectively, in Grades 11 and 12. The work placements are arranged by a school guidance counsellor.

Beginning in 1996, the Nova Scotia Department of Education and Culture made it mandatory for high school students to take a career-preparatory course, Career and Life Management, or its alternate, Creating a Career. These courses usually include a job-shadowing component, but do not provide actual work experience.

An entrepreneurship program is available in all the participating Halifax schools as well as most of the Pictou schools, but not in any of the other sites. One of the Pictou schools recently embarked on a mentorship program with an electrical power-generating plant. The Auburn Drive High School at the Halifax site has introduced several innovative courses, such as Applied Broadcast Journalism and Applied Broadcast Technology.

It is clear that all high school students are exposed to at least one classroom-based course that is linked to work experience. At the same time, it is equally clear that prior to the NSSWT program, only a very small proportion of high school students would have participated in a supervised work placement as part of their high school program. Indeed, in some sites, such as the Pictou schools, no such program was available. In other sites, such as Truro and Yarmouth, only the Business Education program was offered, a program that is not intended for the vast majority of high school students.

The NSSWT program

Background

In the face of both the trends and the persistence of the transition difficulties described earlier, it was increasingly felt that educational institutions were ill-equipped to prepare young people for these new realities. One response was for school boards and governments to introduce more work experience programs into the high school curriculum.

In January 1994, a workshop was organized by the Nova Scotia Department of Education and Culture, with active support and financing from the Innovations Program (now called the Applied Research Branch) of HRDC. This workshop was the impetus for the NSSWT program – a pilot high school program that combined classroom instruction and work experience. The workshop was held mainly for representatives from school boards and directors of community colleges. As a result of this workshop, Nova Scotia resolved to implement a school-to-work transition program that would be responsive to the needs of the labour market.

Enthusiasm for the venture, however, was tempered by a strong awareness of the many unknowns. To determine best practices, it was recognized that a variety of implementations were needed, and that careful research should accompany the implementations to document differences and to evaluate their effectiveness. With financial support from the Applied Research Branch of HRDC, and drawing on the research expertise of HRDC, the Nova Scotia Department of Education and Culture designed a research project to develop and test a variety of school-to-work transition interventions, as a preliminary step to creating and implementing a properly validated, feasible and cost-effective school-to-work transition program.

Focus groups were held with administrators, employers, parents, students and teachers to gather essential information from the perspective of potential partners and to genuinely involve them in the endeavour from the earliest stage.

Subsequently, the Department of Education and Culture met with representatives from all school boards in Nova Scotia. They were invited to submit proposals that adhered to the parameters of the NSSWT program and shared its objectives. (The common parameters and objectives are described below.) Nineteen of the 22 school boards at the time responded to the invitation. Based on a match with the parameters, and the likelihood of furthering the objectives, six sites were selected.

Objectives of the program

Based partly on surveys that consistently linked labour market success to educational attainment, governments in Canada have increasingly favoured supply-side programs. The NSSWT program is one example of such an approach, designed primarily to improve the skills, transitions to work or further education, and overall employability of high school students.

To have enduring effects, programs must modify structures. In the high school context, the insularity of the spheres of work and school is believed to be a major impediment to successful transitions. Practices had to be devised that would encourage schools to work in partnership with employers, while respecting the competency of each in their own fields. To foster individual improvements and new structural practices, the design of the NSSWT program envisaged distinct objectives for high school youth, educators and employers.[16] The program objectives for each of these groups were founded on certain assumptions and understandings of current transition barriers. These emerged from the relevant literature and interviews with various educators, community representatives and employers from around the province.

Starting with the objectives for high school students, it was the position of the program designers that the current and anticipated labour market necessitated a more educated work force. Consequently, a main objective for youth was to provide participants with the opportunity to obtain a Nova Scotia high school completion certificate. With such a certificate, students have the prerequisite for admission into post-secondary institutions, even if they enter the labour market directly.

As indicated at the beginning of this chapter, transitions to work and adulthood are now less regular and consequently more complex and difficult. To facilitate the transition from school to work or post-secondary institutions became a second objective.

It is now well known that ongoing changes in how tasks are accomplished, multiple changes of employers, and occasional changes of career are common features of many work lives. For this reason, a third objective for youth was to assist in the development of generic and specific skills that will help them weather the changes and to find jobs with potential.

The process of matching personal interests and aptitudes with appropriate educational preparation and possible employment opportunities requires careful guidance. The fourth objective was, therefore, to help participants make better educational and employment choices.

In Germany, the close link between various partners in their occupational training system is the envy of many. In Nova Scotia, as in other Canadian provinces and many other countries, schooling and work have traditionally been quite separate. Recognition of the potential benefits of more permeable boundaries between these two spheres led to the objective to link workplace realities with more appropriate education and training.

Finally, although most high school students obtain summer and/or part-time jobs, these are not the types of jobs that give them a sound appreciation of the work they anticipate doing in the future. The program strove to redress this situation by providing participants with the opportunity to gain realistic expectations about their future jobs and appropriate work experience in a job with potential.

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[16] The description of program objectives, parameters and eligibility requirements is adapted from Eaton and Boyer (1995:6).

These student goals underwrote some of the program design features. For example, they necessitated that the program have both an in-school and a work experience component; otherwise, it would be quite difficult to link workplace realities with appropriate education and training. They also provided guidelines for the content of the in-school component (e.g. topics that would help participants make better educational and occupational choices) and for the nature of the work placements (ones that would boost the generic skills necessary for any job that has potential).

To summarize the student objectives, the program aimed to help students:
- complete high school;
- make a smoother transition to work or post-secondary education;
- develop generic and specific work skills;
- make better educational and employment choices;
- link workplace realities with more appropriate education and training; and
- develop realistic expectations about their future jobs and gain appropriate work experience.

The program had two objectives for schools. It hoped to ensure that educators understood the rapidly changing world of work; further, it aimed to provide educators with a realistic and informed view of employers' expectations and the contemporary workplace.

The best vehicles for fulfilling these objectives were felt to be in-service days with relevant school-to-work transition topics, and teacher internships of varying lengths in work settings related to the subject they teach. At the institutional level, if the NSSWT program was to be successful, it would have to help break down the distinct spheres of work and education.

In Nova Scotia, pathways from school to work are not well articulated. There is no formal streaming of students into certain vocational paths, for example. While young people enjoy full freedom of choice of educational programs, they do so with minimal knowledge about the world of work. This is because in countries with a liberal tradition, links between employers and schools are not well cemented. The NSSWT program was designed to better articulate the pathways from school to work by creating solid links between employers and schools. It was established with a clear understanding of the potential benefits of partnering in this arena, as is evidenced by the four objectives for employers. These were to:

- provide opportunities for employers to assist high school students develop generic and specific skills;
- enhance their involvement and commitment to education and training;
- offer valid or useful work experience in a learning environment; and
- foster their ability to work in partnership with schools and other key partners.

The program designers expected that the employer objectives would be fulfilled through mechanisms such as having employers conduct guest seminars on topics, including employer expectations; conducting job interviews with students; developing individual training plans for participants placed with them; and evaluating participants' progress in the training plans. It was expected that partnership possibilities would be enhanced through opportunities to talk directly with teachers, and to participate in the management committees set up in each of the sites.

Parameters of the NSSWT program

During the development phase of the NSSWT project, a review of the experiences of school-to-work transition programs elsewhere, in conjunction with knowledge of current policy developments and the restructuring of public schools, was used to develop a set of characteristics required at each site. The common characteristics, or program parameters, were:

Two-year commitment: The program had to extend over the final two years of high school (Grade 11 and Grade 12).

Two-credit curriculum: One credit toward a Nova Scotia high school completion certificate was to be awarded for each year of participation (i.e. one in Grade 11 and one in Grade 12.)

Dual component: Each credit was to be made up of both an in-school and a work experience component. Employers were to be involved in the work experience component accreditation. The minimum length of the in-school component was set at 20 hours per year. Considerable site autonomy was given with respect to the specific content and the format of the in-school instruction.

The program parameters stipulated that a work placement occur in both years of the participants' involvement. In terms of total number of hours of exposure, the work experience component was to be substantially more intensive than the in-school component. Since the in-school component was 20 hours for most sites, it meant that the work placement would have to be at least 140 hours to make the NSSWT program congruent in structure with the province's high school co-op programs that are at least 160 hours in length.

High school linkage: The school-to-work transition program had to be linked to a regular high school completion program with a curriculum appropriate for entrance to post-secondary institutions.

Targeted training: The program had to provide training appropriate for the local labour markets in jobs with potential. Such jobs were broadly defined as ones that would enhance the participants' generic and specific skills necessary for their future entry into the labour market. All work placements had to be under safe working conditions.

Self-sustaining: The school-to-work program was to be sustainable once HRDC funding ceased.

Partnership formation: School boards were expected to form partnerships (with employers, parents, students and others deemed necessary) in their community.

Additionally, several parameters were deemed desirable, but not essential. These were:

Employer participation: Involving employers in all aspects of the design and implementation of work-based learning programs was thought to be crucial to success. Early involvement in the design was considered especially important, since field research in other programs found that programs "that seek employer participation after the design decisions have been made run the risk of reducing employers' sense of ownership and commitment" (Pauly, Kopp et al. 1994:45). Also, it is generally assumed that employers possess a solid understanding of the changing requirements needed for successful transitions to work.

Educator training: It was seen as important to educate the educators about the changing needs of the workplace through participation in teacher internships, summer workshops with business or other appropriate initiatives.

Partner interaction: Optimally, the program would also ensure ongoing interaction among partners, particularly between employers and schools.

Participant payment: The program designers felt it was desirable to pay students for their work experience component, if possible. They felt paid work would generate more serious expectations of young people than unpaid opportunities. Additionally, it was felt that paid work increases employer ownership of the program and their commitment to provide meaningful work assignments to young people (Eaton and Boyer 1995:28).

However, the policy of the Nova Scotia Department of Education and Culture prohibits paying students for work during regular school hours performed as part of their education. For this reason, only an honorarium could be given to those participants whose work placement occurred during school hours. Employers not able to pay students were to give an honorarium. It was recognized that entrepreneurship and community service were also appropriate work experiences.

All successful proposals fully adhered to the first four parameters. The remaining parameters are more matters of degree than of dichotomy. That is, some implementations may be more sustainable, some school boards may form more significant partnerships, some training may better reflect local labour market needs, than others. Not only are they matters of degree, but the criteria for assessing them needed to be defined. Each of the proposals specified its own understanding and mechanisms for fulfilling these parameters.

Additionally, each site proposed to establish a local management committee that would oversee the program and facilitate communication between the various partners. It was expected to be a major resource for linking the various partners and exposing them to each other's concerns and issues. At each site, a project coordinator would implement the actual program.

Participant selection criteria

By design, the NSSWT program targeted students who were enrolled in a high school program leading to a Nova Scotia high school completion certificate. The students were expected to graduate within two years (i.e. they were starting Grade 11) and had to be sufficiently mature to handle the extra work and responsibility involved. They had to be 16 years of age by the time their work placements would begin, which is the minimum legal age for being an employee in Nova Scotia.

From the above description of the eligibility requirements, it is clear that the NSSWT program was designed to appeal to a wide range of students (the inclusiveness principle).

With respect to which students would be eligible, Eaton and Boyer (1995:21) noted:

> These will include those in the middle range of academic performance as well as those with good academic standing. It is recognized that some of those who do not perform as well at school may benefit from the … program. As such, school officials and the research team will have the flexibility to make exceptions for students who have ability but may not be performing to potential at the present.
>
> Students of both sexes and of all ethnic backgrounds will be encouraged to apply for the Nova Scotia School-to-Work Transition Research project. Therefore, it will be important during the promotion phase to ensure that all students are equally informed and encouraged to participate in the research project. Gender and ethnic diversity will add to the richness of the findings.

Summary and conclusion

This chapter presented relevant aspects of the economic and employment climate facing youth in Canada and in the areas of Nova Scotia in which the NSSWT program was launched. Much of the emphasis in recent years has been on programs that address the supply of well-educated young people into the labour market. While there are other work experience programs in the schools, most notably co-op education programs, it is clear that policy makers felt there was a need for a program like the NSSWT.

Although the NSSWT program built on the experiences of other school-to-work transition programs, it differs from many programs with similar names initiated in countries such as the United States in three main ways.

First, the NSSWT program is not occupation specific. The concrete site implementations of many programs in the United States and elsewhere are linked to a specific pool of occupations that are usually connected to a single, large employer. For example, some implementations are linked to hospitals in the area of food preparation; others to metal workers. The NSSWT program has no occupational requirements other than to help students choose occupations that are likely to have potential.

Second, many of the other programs are aimed at students who are at risk of dropping out of high school. In contrast, as described earlier, the NSSWT program included those at risk of dropping out of high school only if the guidance counsellors and project coordinator felt such students were performing below their potential and had the maturity to cope with the additional time demands imposed by the program. The NSSWT program was founded on the assumption that all high school students could benefit from a properly designed school-to-work program, as long as there were reasonable prospects they could complete a regular high school program.

Finally, many other programs envisaged either a direct entry into the labour market upon completion of high school, or they were linked to specific post-secondary educational institutions that were appropriate for the specific occupational focus of the program.

The NSSWT initiative was more than a program; it was carefully designed as a research project to collect a variety of data that would be valuable for determining best practices. The research design incorporated requirements for valid assessments of program effectiveness. This included using random assignment into participant and comparison groups wherever the number of applicants to the program permitted. This also included pre-test measures to assess initial comparability of the two groups, interim measures to capture process factors, and post-test measures to capture program effects and outcomes.

The next chapter looks at the design and implementation of the NSSWT program in the six sites. This description of the program sets the stage for the research results that form the basis of the remaining chapters, and that inform the "lessons learned and lessons confirmed" as a result of the research project.

2 DESIGN AND IMPLEMENTATIONS OF THE NSSWT PROGRAM

The initial part of this chapter provides a brief description of each site and its proposal.[1] Quotations from the original proposals are used to give a sense of the process and expectations that went into their development. Since all successful proposals adhered to the program parameters, the purpose here is to give an indication of the unique aspects and approaches proposed by the sites. As will be seen, the proposals were very ambitious and the expectations for positive outcomes very high.

The remainder of the chapter describes the implementations in the different sites, noting how these actually compared to what was proposed. Later chapters will examine the actual outcomes in the different sites.

Design

Amherst

Amherst Regional High School, which houses the program, is located in downtown Amherst. This permits most students considerable mobility, since school officials estimate that 7 in every 10 students do not require bus service to get to school. Student enrolment is relatively stable, fluctuating between 610 and 656 students (in Grades 9 through 12) between 1992-93 and 1996-97.[2]

In the proposal from Amherst, four general areas to be covered in the in-school component are mentioned: academic, generic, behavioural and computer literacy. The proposal notes that the in-school component will have "rigorous academic expectations" in which research skills will be developed. For the generic skills, emphasis is placed on the "development of communication skills in the area of reading, writing, speaking and listening." As for inculcating appropriate behaviours, the proposal notes that "(d)ependability, responsibility, attitude and manners will be stressed as important characteristics needed by anyone who wishes success for themselves." Finally, the proposal accepts that "all students leaving high school should be computer literate and keyboard familiar." The budget included Internet training for the participants as well as for the purchase of Careerwares, CHOICES and *Job Search Club.* The proposal also stated that "employers would be expected to provide input to the in-school portion" of the program.

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[1] The program proposals submitted by the six sites are the source of information for this section. Page numbers for the quotations are not indicated since the pages in some of the proposals were not numbered.

[2] All school-enrolment figures cited in this chapter were supplied by Nova Scotia Department of Education and Culture, Statistics and Data Entry Section 1996b.

In the process of writing the proposal, a skeletal local management committee came to be, consisting primarily of representatives from the major partners envisaged for the program. With the addition of representation from parents and participants, the local management committee was expected "to meet on a monthly basis and/or more often as the committee requires." Its mandate was "to oversee the project, participate in its development and insure the research goals are met." It anticipated that the "regular meetings of the committee will insure ongoing interaction between the partners, employers, co-ordinator, teachers, parents, and students." Emerging out of one of the planning meetings came the idea that the local management committee would "review all training plans to ensure that they would meet specific standards and would therefore be consistent with the goals of the program."

To help make teachers aware of the changing needs of the workplace, Amherst proposed to provide at least six teachers with worksite experience. Two options were presented. In the first, a teacher would work with an employer for two weeks during the school year, and substitute costs were budgeted for in the proposal. Alternatively, a teacher could work with an employer for two weeks during the summer months and take five vacation days during the school year. Again, the substitute costs were part of the budget for this site.

Amherst introduced cooperative education programs into six of the seven Amherst County high schools in 1991. School officials estimate approximately 30 students per year participate in the co-op program. Payment for student work experience is not permitted in these programs, and many employers are aware of this. The NSSWT proposal makes reference to some employers seeing the pay issue "as a possible stumbling block," but that "(d)oubts were allayed when employees were given the option of an honorarium." A number of employers wrote letters supporting the proposal but mentioned the pay issue as a barrier.

As a preliminary step in writing its proposal, Amherst held a planning breakfast attended by about 25 employers. Some employers who attended subsequently submitted strong letters of support for the program.

Halifax

Two distinctive features characterized the Halifax proposal. The first is that four separate schools would be involved. Millwood High School and Sackville High School are located in suburbs approximately 35 kilometres from Halifax. Millwood High School has a stable student population of just under 900 (890 in 1995-96 and 876 the following year). The student enrolment in Sackville High School has been declining in recent years; in 1992-93 it served almost 1300 students, but only 1041 in 1996-97. The other two participating schools, Auburn Drive High School and Cole Harbour High School, are close to each other but geographically separated from the other two schools. Auburn Drive High School is a new school, opening its doors in 1994-95 to relieve the extreme congestion in the Cole Harbour High School, which had a student body of 1880 the previous year. In 1994-95, these two schools served 1114 and 959 students, respectively. Students from the Preston area, first settled by Black Loyalists in 1782, attend these schools. The proposal is sensitive to the nature of the communities being served, indicating that "(i)n presenting the program to the private sector, the issue of equity for minority groups will be consistently brought."

The physical separation between the participating schools would pose some logistical challenges. To deal with this, advisory committees at the school level were to be set up. The proposal expected that these school-level committees would "provide the most direct and important link between appropriate strategies, learning outcomes and post secondary institution linkages."

The second distinctive feature was the intimate relationship proposed between the existing co-op programs in each of the four schools and the NSSWT program, specifically that the co-op teacher in each of the schools would act as an in-school coordinator. Substantial duties were expected of these in-school coordinators, including publicizing the program to the community, arranging for suitable work placements and the associated training plans, monitoring student progress, presenting workshops and working with students, parents, employers, principals and the school councils. An ultimate merger in staff between the co-op and the NSSWT program was anticipated: "Although a coordinator will be required in the initial set-up of this new program, it is anticipated that eventually, the co-ordinator's role will encompass both co-op Education and SWT."

In the Halifax proposal, the in-school component for both Grades 11 and 12 was to be delivered in the form of four five-hour workshops. The proposal noted that some of the topics are the same but that they "will be dealt with in greater depth building upon their experiences from Grade 11." In that year also, "Industry and Business personnel will be called upon to deliver much of the material to give it a particular industrial flavour." The content of the in-school component was expected to be similar to that of co-op, since "the Co-operative Education course already offers much of the curriculum described under the SWT credit although the treatment of topics in the SWT credit would be expected to be more specific as the student focuses on a particular career."

The proposal indicated that "the program will increasingly rely on the use of distance education technology, Cable 10, industry personnel and work site instruction to deliver curriculum modules."

The Halifax proposal provided a clear and explicit sequence of student competencies expected at the end of each of the high school grades.

Two points are worth noting about Halifax's marking scheme. First, it anticipated that the teachers (presumably co-op teachers) would do the marking of the in-school component. Second, that "a variety of instruments ranging from surveys, questionnaires, portfolio production, student self-assessment to checklists of demonstration of specific skills" would be used.

The mandate of the local management committee was "to recommend policy, recommend areas of internship or apprenticeship based on local employment trends, recruit new employee [sic] and promote the program within the Metropolitan area." Elsewhere, the proposal stated specifically the "mandate of this committee is to ensure that the project is efficiently and effectively utilizing the resources of the business sector and responding to the changing employment trends."

The Halifax proposal accepted the rationales for participant payment. However, it too felt this would inhibit employer participation, especially of smaller businesses, and that this parameter would "remain a challenge during the current period of economic decline and company downsizing." It promised that "(p)olicies and procedures for the reimbursement of students will be developed in consultation" with the local management committee.

Pictou

The Pictou proposal shared an important feature with that of Halifax, namely the participation of multiple schools from geographically diverse communities. Students were to be drawn from seven schools. The Pictou area is predominantly rural. Hence, in conjunction with decreasing enrolments, the individual schools have experienced increasing difficulty mounting even the core programs. Having a number of schools jointly participate in a single endeavour such as the NSSWT program represents a creative approach to the problem of small student numbers in the high schools. The populations in the seven high schools range from under 200 to just over 500 students.

Pictou had an interesting approach to teacher awareness. Primarily because of the dispersion of participating schools, it proposed that "each student will be assigned a teacher/mentor within their home school. They will meet with this person on a weekly basis – this will improve communication with the school."

In its promotional newsletter, appearing in the Chamber of Commerce publication, the local management committee stated that the "target group for this program is your average high school student who often gets lost in the crowd because they are neither at risk or high achievers." This is not quite the same, however, as the inclusiveness principle that was advocated in the project design.

Pictou proposed a creative use of students in the program, stating that "(s)tudents completing SWT11 will conduct an Exit Exhibition for interested students in Grade 10. This exercise will be part of the evaluation process for the student while also fulfilling promotional purposes."

The Pictou proposal features very clear descriptions of the roles and responsibilities of the project coordinator, parent/guardian, participant, employer, teacher/mentor and the local management committee.

Sydney

Memorial High School, located on the outskirts of Sydney Mines, about 30 kilometres from Sydney, has a catchment area that is experiencing severe economic difficulties. In light of this, it is not surprising that the Sydney proposal started with a strong emphasis on entrepreneurship and transferable skills:

> Realistically there are two good options for the young people in our area; to relocate to find employment or to create their own jobs; i.e. self-employment.

Given the depressed economic climate of the area, the proposal emphasized flexibility with respect to the work placement, indicating that "students will have three reality-based practices to choose from: entrepreneurship, community service, and work experience."

Memorial High School is experiencing slight declines in student enrolment. In 1992-93, it served 1100 senior high school students; by 1996-97, this figure had dropped to 994. School officials estimate that 80 percent of the students are bussed to school, imposing transportation constraints on this site.

There are indicators that students would be quite heavily responsible for the nature of their program. In the in-school component, this manifested itself in the expectation that the delivery "will be interactive with students participating and the teacher becoming more of a facilitator in many instances." Also, six of the nine members of the decision-making board of directors were to be students.

Compared to some of the other proposals, partnership is not emphasized much here, except for the link between the school board and a community development organization called New Deal Development. Perhaps the reason for this is that the project coordinator for this site was also the executive director of New Deal Development, and personally took the lead in writing this proposal. Because of her community development background, the project coordinator had solid connections with the local business community. New Deal Development's business development corporation, the Northside Economic Development Assistance Corporation, was to "assist with the business curriculum planning, delivery, and to evaluate the students who choose entrepreneurship in their reality-based practice."

A dual structure was envisaged for the local management committee, with decision-making powers invested in a board of directors (a nine-person board composed of two members from the local management committee, the executive director of New Deal and six elected students from among the participants). The mandate of the local management committee was to "develop all the details of the project, and assist with formulation of evaluation sheets. The Committee will make quarterly reports to both the school board and the board of New Deal Development."

That "(l)ocal employers may wish to financially contribute" was mentioned in passing. In conjunction with the expectation that entrepreneurship and community service would be emphasized, it is clear that payment of students was not likely. The proposal talked about remuneration as being both tangible and intangible, the former being a possibility in only two of the three work experience options and the latter being available for all three.

Truro

Truro's central location, equidistant from Amherst and Halifax, played a determining role in its history. The town was nicknamed "the hub of Nova Scotia" more than a century ago, because this was where railways linking the province merged. Approximately 1700 senior high school students attend Cobequid Education Centre (CEC) at the edge of the town, about half of whom are bussed in from the surrounding rural areas.

The highlight of Truro's application is the intimate partnership with Central Nova Industry Education Council (CNIEC). The proposal stated that the "CNIEC will be an integral part of (the) organization and set up of the SWT program. The Council is comprised of local business, industry and education leaders whose primary focus is to assist students in making a successful transition from school to work." It describes it further: "The CNIEC has a Career Information Centre located one block from CEC. This Centre has two career advisors who are trained to assist students in career research and is replete with materials for post secondary research."

The local business community was quite involved and supportive of the NSSWT project. In preparation for the proposal, a survey of over 100 area employers was conducted, and 87 percent indicated they "would consider business-education partnerships."

The pre-employment training topics (14 hours) and their dates were outlined in the proposal, which together with the reflective learning would constitute the in-class component. A total of 10 hours of reflective learning was scheduled at one-month intervals. The proposed Grade 12 curriculum focused heavily on entrepreneurship. The Youth Entrepreneurial Skills Program, mentioned in this connection, was to "give students the opportunity to think about entrepreneurism as a career option. We will encourage students to prepare a business plan and submit it to the Department of Economic Development."

The most distinctive feature of the Truro proposal is the curricular integration of the in-school component. The school-to-work-transition course (SWT) was to be scheduled into the six-day, six-period school year and it would meet weekly for approximately one hour. Involvement of students in the decision-making apparatus was another key element in the Truro proposal.

The Truro proposal recognized the need to make teachers more aware of the changing needs of the workplace. It proposed three methods to accomplish this – educator shadowing, teacher internships and occupational-awareness seminars. In educator shadowing, teachers would "spend time in the business community observing a worker employed in a career field that relates directly to the educator's background, preparation, and current teaching assignment." The proposal does not indicate what methods would be used to either promote or support such shadowing. Likewise, it gives no indication about how many teacher internships it hoped to have – where "(t)eachers would volunteer to work with an area business during a portion of the summer, doing professional assignments and learning about the skills needed by the business community" – nor how they were to be encouraged.

Several employers were contacted with regard to paying the student for the school-to-work transition work experience. They found that "(m)ost businesses contacted … were not opposed to the idea. Employers who are not able to pay students were interested in the idea of an honorarium to the project or providing services in kind."

The local management committee was mandated to "approve the curriculum, make suggestions about recruitment, and the promotion of the program." It would "review the program and make recommendations to the Board at the end of the year." Finally, it was charged with "an examination of the budget, student and employer questionnaires, staff evaluations, training placement evaluation and student progress evaluations."

Yarmouth

Located on the extreme southwest tip of Nova Scotia, the town of Yarmouth is well known for its fishing industry. The collapse of the fish stocks and the closure of a big textile plant hurt the local economy. Recent high-speed ferry connections to the United States are designed to make it a popular tourist town. Yarmouth Consolidated Regional High School, located within the town itself, has a steady enrolment of approximately 750 high school students. School officials estimate that about 70 percent of the students are bussed in from neighbouring fishing communities.

The Yarmouth proposal was an ambitious one. As part of the preparation for its proposal, Yarmouth sent out questionnaires to employers, parents and students. It reported that the "survey conducted with parents of grade ten students revealed a desire to proceed with such a project. They saw the future as uncertain and the project as being able to reduce the uncertainty that much more." Its ambitiousness was also foreshadowed in that it felt that school-to-work transition program was a misnomer, thinking it more appropriate to call it a "school-to-life" program.

The proposal included substantial amounts of information about the local labour market, job vacancies and labour market imbalances.

Another sense of the ambitiousness and thoroughness of the proposal is revealed in the fact that it proposed a 72-hour in-school curriculum for SWT11. Additionally, it proposed "another forty hours will be spent obtaining industry and employer recognised certificates such as Food Handling, Super Host, WHMIS…"

Not only is the Yarmouth proposal ambitious, it prides itself in its arm-length relation to the school:

> The SWT program takes a huge step away from (previous) programs in that it is community taught instead of teacher taught, community managed instead of teacher or department managed, the SWT12 will be employer driven rather than school driven.

The work experience component was just as ambitious as that of the in-school. In Grade 11 it was to consist of 150 hours, 200 hours in Grade 12.

Under "employer responsibilities," it proposed that they "agree to pay students enrolled in SWT12." The proposal states that "(t)he work during the SWT11 credit is not required to be paid, although employers will be encouraged to do so. Employers may also provide an honorarium if they so wish." The underlying logic might be that the first work experience is essentially an unpaid training period, while in the second experience the employer is reaping the benefits of a trained worker and therefore would be required to pay the participant.

Like the Pictou proposal, Yarmouth delineated the responsibilities of all players. It then proceeded to list the benefits to each of the players.

The Yarmouth proposal took sustainability seriously, indicating that "the biggest concern expressed by all involved in the project was the sustainability after the funding has ceased" but that "after looking at the situation closely, it was agreed that this goal is not as unattainable as first thought." The proposal then provided a seven-point plan to achieve program sustainability. This included some innovative partnering. A series of workshops was planned, which would involve both teachers and students.

Although the program in Yarmouth was designed to be very demanding, a non-competitive form of evaluation was proposed: "It is the belief of the committee developing this proposal that a pass-fail approach be used in evaluation."

The Yarmouth proposal made a number of interesting recommendations, including "tax breaks for employers willing to participate in the SWT12 credit course, even if it is just a token. Employers must feel some sense of appreciation from the government for their contribution."

Having given the flavour of the six site proposals, this next section provides an overview of the common features and objectives of the NSSWT program. The implementations shared common parameters and objectives, but differed in many specifics.

Implementations

Over the three years of the program, individual case studies documented the implementation in each site (Chaytor Educational Services 1996a; 1996b; 1996c; 1996d; 1996e; 1996f; 1997; Thiessen 1998a). The case studies employed a variety of methods for obtaining information on implementation, ranging from focus groups with students, parents, employers and project coordinators, to individual interviews, observation during site visits and analysis of documents.

Although detailed information on program implementation is available for each of the sites, comparisons are required to assess best practices over time and across sites. The overall objective of this section is to provide this basis. The more specific objectives are to compare and contrast the six site implementations and to assess the extent to which the implementations fulfilled the parameters set out for the program.[3] The description of the practices at the six sites also provides a firm basis for evaluating their likely enhancement of the program objectives.

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[3] The nature of the objectives of this section is such that comparisons between sites, some of which may appear negative, are made constantly. It should therefore be stated explicitly and vigorously that all six implementations exhibited many laudable and innovative features. At the same time, some sites experienced difficulties in one or more aspects of their implementation. It is important to note these as well, since they serve as cautions for future school-to-work transition programs.

Implementation dynamics

The NSSWT program was funded for three school years; 1995-96 marked the year in which the first cohort of students was accepted. All students were beginning Grade 11. In the second year, the 1996 cohort of Grade 11 students was admitted, while the 1995 cohort was now in Grade 12 and in the second year of the program. The third implementation year, 1997-98 spelled the completion of the program, with the 1996 cohort now in its second, or final, year of the program.

Each year had its own pressures and challenges. The first year was a pressure cooker. The concerns and activities of three levels of bureaucracy (federal, provincial and county) had to be addressed and coordinated. If that were not enough, the project was also designed to have a major research component. That meant the various research activities, such as the development of questionnaires, also had to be completed. With so many different players and functions, and so little preparation time (the successful sites were not announced until August 1995), little seemed certain.

Year Two was the year of adaptation and team building. For the project coordinators, this was the busiest year since they had to administer and oversee the program for two cohorts of students. The summer months between the first two school years had given the project coordinators a chance to catch their breath. Numerous conference calls between the research team members and the project coordinators, as well as two face-to-face, all-day meetings, had created the foundation of trust and the sense of group venture and identity necessary for the successful implementation of the program. The project coordinators enjoyed the chance to discuss how things were going at each other's sites and to learn how things were organized and how various problems had been handled.

The case study researcher visited each site during March and April of the first and second years, documenting the concerns and issues for each site. As a result of the ensuing reports and discussions, a variety of changes were put in place for the second year. More time for reflective learning was introduced in some sites; more workshops in others. The possibility of videotaping mock job interviews was explored and implemented in one site. Project coordinators wanted to see each other's base of operation, and one group visit was organized for the Truro site.

Consolidation marked the third year of the program. Project coordinators were more confident about what worked and what did not. Some sites, such as Yarmouth, were accepting new participants despite the fact that government funds would not be available. For other sites, it was a time to assess how a school-to-work transition program could be implemented at their site without federal funding. Coming to a close, there was also a sense of coasting and denouement, with less innovation and change than in the previous year. The pressure now was to find ways to sustain the program.

Description of the implementations

The implementations in all six sites comprising the NSSWT program extended over the final two years of high school, with participants earning one high school credit each year. Each credit was composed of both an in-school and a work experience component and was linked to a regular high school program. In these respects, the implementations conformed to the required program parameters.

The remaining parameters (appropriate work experience, sustainability and partnership formation) are matters of degree. The same is true for the desirable but not essential parameters (involving employers, training educators, paying participants and facilitating interaction among partners). The sites differed in the extent and manner in which they met these parameters.

Project coordinators

School boards selected and appointed the project coordinators for each site. Although the specific selection criteria are not known, some combination of prior work with young people, teaching experience and familiarity with the business community appear to have been important considerations in choosing project coordinators.

The initial success of any new program depends to a large extent on the competence and enthusiasm of its staff. The importance of the project coordinator's role is evidenced by the variety of tasks expected of each. In all sites, these included recruiting students; recruiting employers; establishing student work placements; formulating training plans; monitoring work placements; facilitating partnerships and interactions with, and between, employers, parents, community organizations, students and educators; meeting with the local management committee; doing general administration, public relations and program promotion; and evaluating students (with input from employers). The project coordinators were responsible for planning and conducting the in-school component in all sites except Sydney, where a licensed teacher was hired for that task. The project coordinators in Amherst, Pictou and Truro also planned and delivered a teacher in-service on school-to-work transitions.

The project coordinators started their new responsibilities without any specific training in school-to-work transitions. Opportunities to attend national and international conferences on workplace realities and school-to-work transition issues were, however, made available. Project coordinators from Amherst, Halifax, Pictou and Yarmouth took advantage of such opportunities.

All project coordinators except for the one in Yarmouth remained with the program for the three years of implementation.[4] By remaining with the program over this period, the project coordinators provided continuity, a factor thought to contribute to successful implementations.

The project coordinators differed on a variety of characteristics, such as gender, age and teaching status (Table 2-1).[5]

Gender balance characterized the coordinator positions; three were female and three male. There is little reason to believe that the gender of the instructor or coordinator would significantly affect the functioning or delivery of the NSSWT program.

However, the teaching status of the project coordinator is more germane, particularly for the extent and nature of contact between the program and the host school. In three sites (Halifax, Sydney and Yarmouth), the project coordinator was not a teacher. The NSSWT program took steps to minimize any adverse effects that the non-teaching

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[4] The erstwhile Yarmouth project coordinator was reassigned to other duties in the newly amalgamated school board. A member of the local management committee with extensive business experience and contacts was hired to continue as project coordinator. The new project coordinator had served as a member of a very active local management committee, which facilitated a sense of continuity for this site. Due to health problems, some of the project coordinator's duties in Truro were taken over by a substitute teacher for part of the second and third years. Likewise, in Pictou the project coordinator was on maternity leave for the second half of the third year. Her duties were assumed by a substitute teacher.

[5] As discussed in the first chapter, the NSSWT program intended to attract a wide range of students, including a mix of ethnic backgrounds. In this context, it should be noted that all project coordinators were white.

Table 2-1

Profile of project coordinators by site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Gender	female	male	female	female	male	male
Age group	40s	30s	30s	40s	30s	40s
Teaching status	teacher	non-teacher	teacher	non-teacher	teacher	non-teacher
Office location	school	school board office	school board office	Community Economic Development offices	school	school board office
Percentage of assignment to the NSSWT program	75	100	100	50 (with assistance)	50	50 (with assistance)

Source: Project coordinators' questionnaires and interviews

status of the project coordinator might have. In one of these sites (Halifax), the co-op coordinators at the participating schools assisted with the in-school component. In Sydney, a teacher was assigned to the NSSWT program for this purpose. Finally, in Yarmouth the project coordinator effectively used a very active local management committee, which included several educators, to ensure curriculum integrity.

Half of the project coordinators were in their 30s, half in their 40s. They therefore had substantial experience in their teaching and other professions.

The location of the project coordinator's office has implications for the visibility of the program in the school. In two sites, Amherst and Truro, the project coordinator's office was in the school itself, which might have helped to spark student interest in the program. The location of the project coordinator in the school is auspicious for another reason, since it is well known that proximity encourages social interaction. One of the ways through which educators might become more knowledgeable about the changing needs of the workplace is through informal discussions with the project coordinators. Such discussions are more likely when the project coordinator is housed in the school. Evidence to this effect is provided later in this chapter, in the section *Connecting with community.*

Project coordinators' assignment to the NSSWT program varied between half and full time. Full-time assignments were made in Halifax and Pictou, mainly in recognition of the fact that the program in these two sites drew students from multiple schools, with the attendant coordination difficulties. In two sites with half-time assignments, additional assistance was provided; in Sydney, as mentioned previously, a teacher was assigned to conduct the in-school component, while in Yarmouth the school's facilities, including photocopying and support services, were available to the project coordinator.

Promotion and publicity

Since the NSSWT program constituted a groundbreaking venture at the point of its introduction into the curriculum of participating schools, the extent and nature of its promotion was of more than usual importance. The ideal promotion of the NSSWT program would be timely, intensive and inclusive.

To be timely, the promotion should be conducted in the spring so that students have the opportunity to reflect on whether such a program would suit them and, if so, to organize themselves so they could take part. Unfortunately, announcement of the funding for this program did not occur until August 1995, with the result that the promotion in the first year was not as timely as desired.

The research design of the NSSWT project was based on attracting at least twice as many student applicants in each site as would be accepted into the program. If the promotion were sufficient enough to accomplish this, then random assignment of applicants into participant and comparison groups could be carried out. Such a process would enable valid inferences about the effects of participation in the NSSWT program to be made.

Inclusiveness was essential because of the history of previous work experience programs. Historically, high school work experience programs were often targeted to specific groups of students. In some schools, they were aimed at those students not being encouraged to go on to post-secondary education. In other schools, only academically top-notch students were accepted into co-op programs, for example. In contrast, the underlying principle of the NSSWT program was that it should be attractive to all students, and appropriate for most.

The late announcement of funding for the program affected the timeliness of the promotion. For the first cohort, initial promotion took place in the spring of 1995 (see Eaton and Boyer 1995) but coverage reached all Grade 10 students in only three sites (Yarmouth, Pictou and Amherst). Students in only three of the four participating schools in Halifax were informed about the program at that time. In Truro, the promotion was limited to those students who had already expressed interest in the co-op program. In Sydney, only students who met previous criteria for work experience programs were contacted. The research team feared that the limited coverage in these sites might introduce a bias in favour of specific types of students that was not in accord with the NSSWT selection criteria. Because of these fears, a second promotion took place in September 1995.

As will be seen shortly, the available evidence suggests this fear was not warranted, perhaps because of the second promotion. Another concern was that the limited coverage would result in insufficient applications to permit random assignment, a concern subsequently justified. Even with the additional promotion, random assignment was possible only in Pictou and Halifax.

Promotion for the second cohort was not subject to the same time constraints. In each site, the project coordinator made classroom visits in April or May, usually to the Grade 10 English class, to describe the program and the application procedure. In most sites, the program was also announced in school assemblies, and information sheets were distributed in Amherst and Pictou. Halifax and Truro described the school-to-work class in course handbooks.

Table 2-2 documents the type of publicity the NSSWT program received in each of the sites each year. Four of the sites showed a commendable variety of ways of making the NSSWT program visible. Visibility of the program in the remaining two sites (Sydney and Pictou) was somewhat undeveloped. In relation to teacher and school board endorsement, it would have been desirable to have more publicity in school newsletters, school board publications and teacher/staff meetings. Such publicity was especially desirable in Sydney, where the project coordinator was not a teacher.

In the first two years of the program, the case studies documented a possible shortcoming: insufficient visibility and communication (see Chaytor Educational Services 1996a; 1996b; 1996c; 1996d; 1996e; 1996f; 1997). Some of the project coordinators felt that informal word-of-mouth communication was a better medium than formal.

Applicants

Two hundred and fifty-five students applied to the program in 1995. This increased to 304 for the 1996 cohort, perhaps due to the increased visibility of the program by that point in time. Application to the program consisted of filling out a registration

Table 2-2

Visibility of the NSSWT program by implementation year and site

	Amherst			Halifax			Pictou			Sydney			Truro			Yarmouth		
Year	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Newspaper	○	●	●	○	●	●	●	●	○	●	●	○	●	●	●	●	●	●
Radio or television	○	●	○	○	●	○	○	●	○	○	○	○	○	○	●	○	○	○
SWT T-shirts, mugs, pins, etc.	●	●	●	○	●	○	○	●	○	○	○	○	●	●	●	●	●	●
Brochures	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Chamber of Commerce publication	○	○	●	○	○	●	○	●	●	○	○	●	○	○	●	○	○	●
Course handbook	●	●	●	●	●	●	○	○	○	○	●	●	●	●	●	○	○	●
School newsletters	○	○	●	●	○	●	●	○	○	○	○	○	○	○	●	○	○	○
School board publications	○	○	●	○	○	●	○	○	○	○	○	○	○	○	●	○	○	○
Teacher staff meetings	○	●	○	●	●	○	●	●	○	●	○	○	●	●	○	●	●	○
Other	○	●[a]	●[b]	○	●[c]	○	●[d]	●[e]	○	●[f]	●[g]	○	●[h]	●[i]	○	○	●[j]	○

Key: ● = yes ○ = no

[a] Program summary for employers; [b] school board presentation; [c] program booklets to employers; [d] spoke at Chamber of Commerce; [e] spoke at the Rotary Club and the Chamber of Commerce, and pamphlets to employers; [f] spoke at Rotary meeting; [g] notice of participants' schedules to teachers; [h] article for Work Education Association of NS publication; [i] newsletter for employers; [j] calls to interested employers.

Source: Project coordinators' questionnaires and interviews

form and having it signed by the applicant, the parent(s) and an educator, usually the school counsellor. Interested students had to attach a brief description of why they wished to be selected for the NSSWT program, and how they would be able to maintain academic standards in their school work while carrying out additional activities. This served to weed out potential applicants who lacked the maturity to take on the additional responsibilities.

The registration form also obtained information about the student necessary for determining eligibility (e.g. academic performance and age). In addition to verification by the school counsellor that the applicant "can accept the level of responsibility required" for the work placement, the form inquired about the gender and immediate post-high school plans. The latter two pieces of information were used as criteria for selecting comparison students in those situations where the number of applicants was insufficient to permit random assignment. When randomization was not possible, Grade 11 students in the participating schools were asked to be part of the research as the comparison group. In each site, the comparison group was matched to the participant group in terms of gender distribution and post-high school plans. Table 2-3 summarizes the information on applicants.

Table 2-3

Gender and post-high school plans of applicants to the program by cohort and site

	Amherst		Halifax		Pictou		Sydney		Truro		Yarmouth	
Cohort	95	96	95	96	95	96	95	96	95	96	95	96
	%	%	%	%	%	%	%	%	%	%	%	%
Gender												
Male	50	52	53	39	24	23	22	28	38	38	6	29
Female	50	48	47	61	76	77	78	72	62	62	94	71
Total	100	100	100	100	100	100	100	100	100	100	100	100
Post-high school plans												
Work	4	13	5	1	12	3	6	11	4	4	12	5
Community college	0	22	8	11	14	9	6	3	23	12	24	10
University	61	35	70	79	58	78	81	69	58	69	59	69
Other	4	4	11	6	3	4	4	8	12	12	0	5
No idea	30	26	5	4	14	5	4	8	4	4	6	12
Total	100	100	100	100	100	100	100	100	100	100	100	100
Total N	24	23	74	85	59	92	55	36	26	26	17	42

Source: Registration forms

As indicated above, the 1995 promotion did not yield a sufficient number of applicants to permit random assignment in all sites. In addition to the two sites where the promotion was selective (Sydney and Truro), Amherst and Yarmouth failed to attract a sufficient number of students. In the 1996 promotion, Yarmouth attracted enough students to permit randomization.

In most sites, and for both cohorts, the program seemed to be more attractive to girls than boys. Overall, the ratio of girls to boys is approximately 2:1. This imbalance appears to be unrelated to the gender of the project coordinator. For example, both the highest and the lowest percentage of male applicants occur in sites with a male project coordinator (Halifax and Yarmouth 1995 cohort, respectively).

Attending university is the post-high school plan of the majority of applicants in both cohorts and in all sites (with the sole exception of the 1996 Amherst applicants). In this, the applicants are probably similar to other Nova Scotia students. For example, an analysis of the post-high school plans of Grade 10 and Grade 11 students in Nova Scotia revealed that 63 percent of them expected to attend university immediately after completing high school.[6] The same analysis indicates that the applicants were in general more likely to plan on pursuing any post-secondary education and consequently less likely to plan on entering the labour force directly after completing high school than students generally. This suggests that the NSSWT program disproportionately attracts students with high academic aspirations. Of course, the eligibility criteria and the requirement of having to write a paragraph describing the reasons for applying could have had the indirect effect of discouraging applicants with low aspirations. It is also possible that young people are increasingly likely to recognize, as the title of a recent joint publication of HRDC and Statistics Canada (1998) suggests, that *High School May Not be Enough.*

One might expect a program such as the NSSWT program to be especially attractive to students who are uncertain about their future. Amherst is the only site that consistently attracted such students with over a quarter of the applicants in both years indicating they had "no idea" what their post-high school path would be. It may be that this is a consequence of how the program was promoted at this site, since its proposal indicates it intended to target students "who are unsure of what the future brings."

As mentioned previously, the inclusiveness principle of the NSSWT program is one that differentiates it from many other work experience programs in Nova Scotia. In the NSSWT program, most students enrolled in a regular Grade 11 high school program would be eligible, excluding only those whose academic performance was such that they would be unlikely to complete high school within two years, those who were not sufficiently mature to handle the extra responsibilities, and those who were younger than 16 years of age.

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[6] The analysis was performed by Thiessen on a random sample of Nova Scotia students who in 1989 were in Grade 10 or Grade 11. For more details on the study design, see Looker (1993).

The project coordinators were asked to which categories of students they would aim the promotion if they were to design a school-to-work transition program. After three years' experience, would they endorse the inclusiveness principle?

On the whole, project coordinators did endorse the inclusiveness principle: they would not exclude any specific categories of students. Some of their comments on this topic were:

> This program is of great benefit to a variety of students.
>
> I think any student would be a good candidate because everyone can achieve in different ways.
>
> When you get a cross section of students, it adds depth to the experience for all involved.

In a focus group of all project coordinators, consensus emerged that the only attribute of a poor candidate for a school-to-work transition program is a student with a history of poor attendance. Such students were found not to have the maturity to handle the extra commitments required in the NSSWT program. In short, the project coordinators' experience confirms the wisdom of the program's inclusiveness selection criteria.

Participants

Initially, it was expected that the NSSWT project would encompass six sites with 25 participants per site in both cohorts, with an identical number of comparison students at each site. The actual number of participants selected depended to some extent on the anticipated ease of finding appropriate work placements. Table 2-4 summarizes the student numbers.

In the first year, in anticipation of placement difficulties, Pictou and Yarmouth restricted the number of participants to 20 and 17, respectively. In contrast, for the second cohort, Halifax increased its intake by half as many again to 37 participants. The research team felt the increase was desirable because Halifax is in many ways

Table 2-4

Number of participant and comparison group students by cohort and site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
1995 cohort						
Participant	26	25	20	25	24	17
Comparison	25	25	20	25	25	17
1996 cohort						
Participant	20	37	20	25	25	22
Comparison	20	37	20	25	25	21

Source: Project coordinators' records and Corporate Research Associate files

representative of the labour market context many youth will face. This increase was possible because of the much larger pool of potential employers in this site.

In-school component

Design and Delivery

The NSSWT program stipulated that there be an in-school component in each of the two years (i.e. in Grade 11 and in Grade 12). The minimum length of this component was mandated (20 hours), but not the specific content, other than that the curriculum should be appropriate for entrance to post-secondary institutions. A desirable parameter was that various partners, but especially employers, be involved in the design of the in-school component.

Several points about who helped in either the design or implementation of the in-school component are worthy of note. First, in all sites the in-school component was either the direct responsibility of a licensed teacher, or various agencies were brought in to provide workshops and give guest lectures and seminars. Having the in-school component handled by persons licensed to teach in Nova Scotia has certain benefits: potential conflicts with the teachers' professional association are minimized; academic credibility and content appropriate for a high school credit are likely to be maintained; and, as will be seen later, the integration of the NSSWT program into the school system is enhanced. At the same time, restricting the in-school component to licensed teachers has potential disadvantages. In particular, knowledge of the local community and productive relations with the business community may be premium commodities among teachers.

Second, all six proposals stated that employers (staff from CNIEC in the case of Truro) would help design the in-school curriculum. Clearly, the intent was to have solid input from the business community.

Third, with the exception of the Sydney site, employers were involved in the design of the in-school component, indicating that implementation matched intention.

A wide variety of partners were involved in the design of the in-school component. At the same time, noticeable by their absence were parents (only Pictou proposed their inclusion in the design) and students (proposed only in Pictou and Sydney). Students and parents were not involved in the actual design of the in-school component in any of the sites. They were also absent in the delivery of the in-school component (except in Yarmouth, in which co-op students took some part). Their absence would not foster partnership.

Finally, it appears that business representatives or employers had less involvement in the design and delivery of the in-school component than the program designers had originally intended. Repeatedly, it was indicated that their involvement was considered crucial (Eaton and Boyer 1995:6-7, 11). Thus, among the program objectives for the employers, were "to enhance employers' involvement and commitment to education and training" and to "enhance employers' ability to work in partnership with schools and other key partners." Likewise, a parameter of the program was that "school boards must form significant partnerships with their community – employers, parents, students and others as deemed necessary." One of the desirable parameters was to "bring partners, particularly employers, into the design of the school-to-work transition model." Finally, in an overall description, the design stated that "partnerships are a key element in this research project, particularly partnerships with employers." Given this emphasis, it seems that the actual involvement of the employers in the in-school component was less than desired or expected.

Length and structure

The total length of the in-school component varied widely between sites and somewhat between years (see Table 2-5). The minimum length of the in-school component was 20 hours. Yarmouth's in-school component was the most ambitious; it was three times as long as that in Pictou, Sydney and Truro. For the second year of the 1995 cohort, the length of the in-school component converged substantially, ranging from a low of 20 hours in Pictou to a high of 32 hours in Amherst. For the 1996 cohort, the in-school component was less diverse than it had been for the 1995 cohort. The three sites that had the longest in-school component in the first year reduced it in the second year.

Table 2-5

Length (in hours) of in-school component by site and cohort

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
1995 cohort						
Grade 11	39	29	20	20	20	60
Grade 12	32	28	20	30	25	27
1996 cohort						
Grade 11	36	28	20	30	25	50
Grade 12	44	24	28	30	31	24

Source: First- and second-year case studies and project coordinators' questionnaires

Conversely, two of the three sites that had started with 20 hours increased the in-school component for the 1996 cohort.

The changes in the length of the in-school component suggest that an optimal length is in the vicinity of 25 hours. Twenty hours, as some school boards had foreseen, "may not be long enough to cover the anticipated curriculum needs" of the program (Eaton and Boyer 1995:10). On the other hand, more than 30 hours results in student dissatisfaction occasioned by the demands on their time, particularly in Grade 12.

A key feature of the Truro implementation is that it was designed to be totally integrated into the school's curriculum and part of the regular school day. This means that the NSSWT class is scheduled in the school calendar along with all other classes. It also means that work placements take place during school hours. The implication is that NSSWT students are regularly absent from school on the days they are obtaining their work experience.

Comments on the questionnaires, as well as the results of focus groups and interviews with participants, consistently reinforced the message that the less similarity the in-school component had with regular classroom instruction, the more positive was the participants' reaction to the in-school component. Structured workshops leading to certificates such as Workplace Hazardous Materials Information System (WHMIS) or CPR/First Aid were particularly well received. The usual mode of delivery of the in-school material was a combination of workshops and classes. Project coordinators in sites with multiple participating schools had little choice except to use a workshop format, since the participants from the various schools had to be brought together to a common location. Pictou's solution to the transportation problem was to meet on certain Saturdays. Halifax relied more on in-service days.

Amherst, in contrast, did not use workshops for the Grade 11 in-school component for the 1996 cohort. Instead, the project coordinator took them on a field trip. The 1995 Amherst cohort also participated in a career expo in Grade 11. Additionally, Yarmouth decided against using a classroom format in its delivery of the Grade 12 in-school component for the 1996 cohort.

As the results will document, the more the delivery of the in-school component differs from a typical classroom, the more the participants valued it. This preference even extended to the location. Sessions held outside the classroom received greater praise than those held in the classroom. For three sites (Amherst, Sydney and Truro), the home base for the delivery of the in-school component was a classroom in their high school. For two sites (Pictou and Yarmouth), the usual location for the in-school component was the school board offices. For the Pictou site, since students from seven schools were involved, this constituted a reasonable solution to the question of location. In Yarmouth, the school board offices were located in a building adjacent to the high school. In part, this location was chosen to symbolize separateness between the program and the school, while still being connected with it. Finally, in Halifax most sessions were held in an adult-education centre located in a shopping mall.

Although these venues constituted the home base for the in-school component, specific sessions were sometimes held elsewhere. For example, local hotel rooms were used for at least one session in Amherst, Halifax, Sydney and Yarmouth. As mentioned in the description of the proposals, the Truro site enjoyed a close collaboration with a nearby career centre and so one session was held there in each year of the program. Accessing alternate venues was particularly prominent in the second year. In that year, all sites except Pictou held sessions in at least two locations other than their usual home base. With the exception of one visit to a school computer lab in the final year of the program, Pictou chose to hold all of its sessions in the same location. The complexity of the coordination and communication logistics that would be required to inform students from the seven different schools about the alternate venues favoured keeping all sessions in one place.

Substantial variation characterized the 1997-98 implementation of the in-school component. As shown in Table 2-6, the in-school component took place in every conceivable time arrangement, from meeting solely on certain Saturdays (Pictou) to meeting regularly during scheduled class time, supplemented by an occasional in-service day for a field trip or a workshop (Truro).

Table 2-6

Structure of the in-school component in 1997-98, by site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Time conducted						
Lunch hour	●	○	○	●	○	○
Evenings	○	○	○	●	○	●
Scheduled class	○	○	○	○	●	○
Saturdays	○	●	●	○	○	○
In-service days	●	●	○	●	●	●
Semester classes	●	●[a]	○	●	○	○
Total number of classes	16	0	0	12	16	0
Total number of workshops	6	4	5	3	2	7
Number of workshops conducted by outside agencies	3	3	3	1	2	5

[a] All were on a semester system with the exception of Auburn Drive High School.

Key: ● = yes ○ = no

Source: Project coordinators' questionnaires

For the 1997-98 school year, the Sydney site introduced a semester structure, while Amherst and Halifax (with the exception of Auburn Drive High School) continued to be on a semester system. Regardless of whether the school was on a semester system, the NSSWT program was spread out over the whole year.

The mix of classes and workshops also differed widely. All sites except Yarmouth and Pictou combined workshops and classes to deliver their in-school component. Sydney and Truro relied least on workshops (one and two workshops, respectively).

Content

Project coordinators used a variety of sources to obtain information on labour market needs and trends. Table 2-7 shows that the HRDC web pages were used in every site. The site, www.ns.hrdc-drhc.gc.ca, for example, provides information on the Nova Scotia labour market. It includes quite specific information, including the 32 occupations that are "expected to provide job seekers the least probability of finding work in Nova Scotia over the next five to six years" (Human Resources Development Canada 1997a). The web site also has useful links to information about the local labour market situation and outlook. In addition, the HRDC publication *Job Futures*, and various magazines and journals were popular. Seldom used, or not at all, were public libraries, school libraries and web pages other than HRDCs.

Table 2-7

Sources for getting current information on labour market needs and trends by site (1997-98)

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Job Futures	●	●	●	○	●	○
HRDC web page	●	●	●	●	●	●
Other web pages	○	○	○	○	○	○
School library	○	○	○	○	●	○
Public library	○	○	○	○	○	○
Magazines/Journals	●[a]	●	●	●	○	●
HRDC regional bulletin	●	○	○	●	●	○
Career Options	●	●	●	●	○	○
Other	○	●	○	○	●	●

[a] *Canada Prospects* and *Venturing Out*

Key: ● = used ○ = not used

Note: "Other" for Halifax is Open for Business, for Truro is CNIEC and career counsellors and for Yarmouth is Access NS Centre.

Source: Project coordinators' questionnaires

Table 2-8 shows a tremendous variety in the types of workshops delivered at each site. Keeping in mind that WHMIS, Superhost, CPR and First Aid were particularly well received, it is gratifying to note that these were offered in most sites for at least one of the cohorts. The exceptions are the Sydney and Truro sites where none of these was offered for either cohort.

Table 2-8

Topics covered in the in-school component by cohort and site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
WHMIS*	●	●	●	○	○	●
Superhost	❷	●	●	○	○	●
CPR/First Aid	❷	●	●	○	○	●
Career Exploration	●	●	●	●	●	●
Job Search	●	●	●	●	○	●
Entrepreneur Experience	○	●	○	●	❶	❶
Technology in the Workplace	○	○	❶	●	❶	○
Post-secondary Program Exploration	❷	○	○	●	○	○
Interview Skills (mock interviews)	○	●	❷	●	○	○
Employer Expectations	●	●	●	●	❷	○
Motivation & Positive Attitude	○	○	○	❶	○	○
Race Relations, Cross-cultural Understanding	○	●	❶	○	○	●
Reflective Learning/Personal Development	○	○	●	❷	○	○
Labour Market Trends	●	●	●	❷	❷	○
Safety in the Workplace	●	●	●	○	○	●
Information Management	○	○	○	○	○	❶
Resources for Workers	○	○	○	○	○	●
Financial & Retirement Planning	○	○	○	○	○	●
Global Sales & Marketing	○	○	○	○	○	❶
Home-to-Work Transition	○	○	○	○	○	●
Food Handlers	○	○	○	○	○	●
Computers (Internet)	❶	○	❶	❷	○	●
Myers/Briggs Personality Assessment	○	○	○	○	○	❷
Career Centre Visit	○	●	○	●	●	○
Portfolios	●	●	●	●	○	○
Pre-placement Training	●	●	○	○	❷	○
Discover	○	●	○	○	○	○
Communication Skills	●	○	●	●	❶	○
New Economy	○	○	●	●	●	○
Confidentiality in the Workplace	○	●	●	●	●	❶
Business Ethics	○	○	○	❷	●	○

*Workplace Hazardous Materials Information System

❶ = 1995 cohort only ❷ = 1996 cohort only ● = both cohorts ○ = neither cohort

Source: Project coordinators' questionnaires and interviews

Having seen the content of the in-school component, the question is then: is it appropriate? A first step to answering this is to revisit the objectives the program had for participants. The in-school component should facilitate at least some of the program objectives for youth. Appropriate content would:

- help participants make good educational and employment choices;
- create realistic expectations about their future jobs;
- link with workplace realities; and
- help participants develop generic skills necessary for obtaining desirable jobs.

To make good educational and employment choices, young people would have to know such things as the educational prerequisites for the jobs they are considering, the employment prospects for such jobs, and the skills and talents needed. Since different skills, talents and interests characterize the participants, the in-school content would require fairly customized content, or it would have to teach participants how to find such information.

To create realistic expectations, trends in the organization of work would have to be discussed, together with their implications for both immediate and long-term decisions. For example, the increasing likelihood of having to change jobs and even careers; the necessity of continual skill and educational upgrading; the decline of primary-industry jobs; and the mechanization and computerization of all aspects of the labour process are essential topics for building realistic expectations and making informed educational decisions. Some of the workshops conducted and the topics covered are particularly germane to these objectives. Others, such as retirement planning, are too tangential and distant to warrant inclusion. Having employers come to the class (or having the participants go to a work site) to discuss what they expect of their workers and what they are looking for in potential employees provides perhaps an even better method for producing realistic expectations. Such a method would have the additional advantage of linking employers with schools and strengthening employer-school partnerships, one of the desirable parameters.

The connection of the in-school component with workplace realities would be strengthened by practices such as providing opportunities for reflective and interactive learning, where issues participants had to confront at work are brought to the class for discussion. The situations experienced in the work placement, how they were handled, and what lessons were learned are possible topics that can be repeatedly discussed. The case studies conducted in the first implementation year made the program aware of this shortcoming. As a result, more opportunities for interactive and reflective learning were provided in the second and third years. This is one example of how the program developed and improved as a result of the ongoing research activities.

Opportunities to work in teams, solve problems, set targets and firm dates, work on large projects that require organization and planning are all ways in which generic skills can be improved. In all sites at least some of these approaches were used. Developing solid résumés increases writing skills and self-presentation skills. Some sites practised video-taped job interviews, which again increases interpersonal communication skills. All sites discussed job-search techniques – a form of information gathering. The popular certificate-type CPR/First Aid workshop inculcates a sense of social responsibility and gives the opportunity to practise adult roles. The WHMIS workshop inculcates an appreciation of possible workplace hazards – a workplace reality. This workshop also emphasizes safe practices and acting in an environmentally and personally responsible manner. In short, much of the content of the in-school component would contribute to the fulfilment of some of the program objectives for youth. The workshops in particular provided hands-on and interactive learning, which participants valued.

Participants' perspectives on the in-school component

Regardless of the design, content and delivery of the in-school component, if the participants do not take to it, then it cannot have the intended effect. This section takes a close look at what the participants liked about the in-school part of the program. Table 2-9 provides the percentage of participants who strongly endorsed various aspects of this part of the program. Looking first at the sites, the patterns of responses show some important differences.

The response to the in-school component in Sydney is uniformly low. In this site, the in-school component was not delivered by the project coordinator. This may have detracted from a sense of cohesiveness of the program as a complete entity. Note also that the time of day in which the in-school component was delivered did not appear to be opportune, with only 1 in 20 participants strongly endorsing the lunch-time schedule.

Halifax can also be described as consistently low in its level of student endorsement, with guest speakers the feature most liked (30%) by participants.

Responses to the in-school component in Truro were mixed, with some features receiving relatively strong endorsement and others very little. Note in particular the contrast between participants' responses to the total number of workshops and seminars, as

Table 2-9

Endorsement of features (% who "very much" like) of the Grade 11 in-school component by site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
	%	%	%	%	%	%
The total length of the in-school component	30	13	52	9	30	14
The length of specific workshops, seminars, etc.	30	15	48	14	13	24
The total number or workshops, seminars, etc.	30	22	52	14	4	31
The content of the in-school component	30	20	59	18	39	45
The guest speakers in the in-school component	33	30	72	18	43	38
The school's support of the in-school component	30	15	17	14	22	31
The time of day that the in-school component took place	50	20	55	5	30	28

N=179

Source: Grade 11 student questionnaire, 1995 and 1996 cohorts (participant group only)

compared to the guest speakers. Only 4 percent "very much" liked the former aspect but 43 percent gave such a response to the latter. Due to scheduling constraints, the Truro site was unable to offer many workshops, and their lack was a source of dissatisfaction among the participants.

Remember that Yarmouth had the longest in-school component by far, and so it is not surprising that the number of hours were a source of discontent in this site, with fewer participants (14%) strongly endorsing this feature than any other aspect.

Participants in Amherst gave moderate (30%) and undifferentiated support to virtually all aspects of the in-school component. That is, 3 in 10 participants said they very much liked each aspect of the in-school component except the time of day in which it took place, which received such endorsement from half the participants.

The reception of the in-school component in Pictou was impressive. Except for the school's support of the program, close to half or more of the participants strongly endorsed every aspect of the program. Since the in-school component took place on weekends, and none of the work experiences occurred during school hours, the question of the school's support of the program, from the viewpoint of the students, is somewhat a moot point. There would be few occasions where the school's support, or lack of it, would be manifested.

Turning to the features themselves, in all sites less than a third of the students strongly endorsed the schools' support of the program. Over the three years of the program, a number of indications pointed to improved cooperation from the schools. Views such as the following expressed by a Grade 12 participant became more frequent in the second and third years:

> The support from teachers is a lot better this year – it (the program) is not new any more so they know what to expect and are more open to it.

The amount of support for the total number of workshops and seminars was variable. Keeping in mind that Yarmouth, Pictou and Halifax organized the in-school component as a limited number of workshops, it is important to note that in these sites the response to the total number of workshops was relatively high (compared to responses to other features at the same site). This corroborates the information obtained repeatedly from the focus groups and other sources that workshops of several hours' duration worked better than a typical classroom format.

Preferred scheduling times of the in-school component varied between sites. In both Amherst and Sydney, the in-school component took place during a lunch hour. Yet in Amherst, the time of day received the highest endorsement (50%) while in Sydney it received the lowest (5%). Both project coordinators reported that the issue of possible times was discussed to encourage a sense of group control over aspects of the program. The difference in student reaction to the scheduling issue is probably related to the location of the schools in the two sites. In Sydney, most students are dependent on a drive to school. This means that lunchtime is the most convenient time during the week for socializing with peers. In contrast, in Amherst the school is located in the town centre, enabling most students to socialize before and after school.

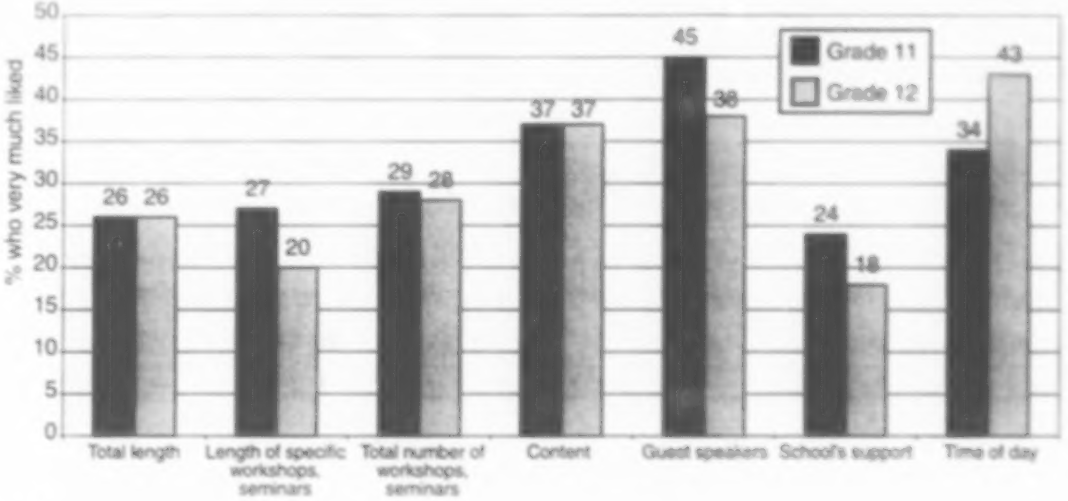
On average, and in most sites, participants strongly endorsed both the content and the guest speakers of the in-school component.

Earlier in this chapter, it was noted that each implementation year faced its own pressures, as well as challenges that were common to all sites. This next section assesses how well the in-school component was received in each of the two years. Were there start-up difficulties? In that case, the participants' responses to the second year would be more positive than to the first year. Vice versa, was the second year of the program too demanding or too repetitious? In that event, the response in Grade 12 would be even more negative than in Grade 11. It is also important to note whether different aspects of the in-school and work experience components functioned better in one year than the other.

Figure 2-1 provides information about the in-school component for the two years. Several things are immediately clear. First, the participants' experiences of the in-school component in Grade 12 are, on average, neither better nor worse than in Grade 11.[7]

Figure 2-1

Assessment of in-school component by year



N=122

Source: Grade 11 and Grade 12 student questionnaires, 1995 and 1996 cohorts

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[7] Since attrition between the first and second year of the program might distort the patterns, the analyses captured in this and the following figure were replicated for just those participants who responded to these questions in both years. The results lead to identical conclusions since in no instance was the difference between the two analyses greater than two percent.

(The bars representing the Grade 11 reaction are approximately the same height as those for Grade 12.) Second, those aspects of the in-school program that were well received in Grade 11 tend to be the same ones that were well received in Grade 12. (The bars for any particular component are roughly the same height in Grades 11 and 12.)

A simple summary measure of endorsement of the in-school component can be obtained by counting the number of aspects participants liked very much in a given year. Doing this shows, for example, that about 3 in every 10 participants did not like any aspect of the in-school component very much in either Grade 11 or in Grade 12 (27% and 30%, respectively). Comparing the number of aspects liked very much in Grade 11 to those liked very much in Grade 12 indicates whether endorsement increased or decreased. Doing this revealed that about 4 in every 10 participants (39%) liked the in-school component less in Grade 12 and the remainder were evenly split between liking it better (31%) and liking it to the same extent as in Grade 11 (30%). The best estimate, then, is that participants liked the in-school component mildly, but not significantly, less in the second year of their program.

Clearly, the effectiveness of the in-school component is tied to both its structure and its content. But its impact is also deeply determined by nuances of atmosphere that are much less clearly documented. Did the project coordinators enjoy being with the participants, for example, or was it tedious? Here are some project coordinators' comments taken from the focus group:

> Being involved with the school-to-work transition students was a lot more fun than the regular classroom teaching type of deal.
>
> Quite a few of our participants have actually got part-time work and this has been the most magnificent thing that has ever happened to them. When I go to the grocery store and I've got kids saying, "Miss, I can't thank you enough, I'm working now, I'm getting money, I can go to university," – like those kinds of things that you would never believe would have happened.

Work experience component

One program parameter stipulated that work placements occur in both years of the participants' involvement. In terms of total number of hours of exposure, the work experience component was substantially more intensive than the in-school component. As stated previously, this was designed to remain congruent with the Nova Scotia

Department of Education and Culture's requirements for its co-op programs, in which at least 120 hours are to be a work experience and the total length at least 160 hours. Since 20 hours was proposed for most sites, it meant that the work placement would have to be at least 140 hours. This was, in fact, the norm in most sites and for both work placements. The exception is Yarmouth, which required 150 hours in Grade 11 and 200 hours in Grade 12. In the final year of the program, Truro reduced the length of its work placement to 125 hours.

Various schedules were developed to fit in 140 or more hours of work experience per year. Some sites, such as Amherst, Halifax and Sydney, used every possible combination of time schedules (see Table 2-10). Truro, in contrast, started by having all work placements during school hours, but moved to more flexible arrangements by the third year. Participant and project coordinator reports support the conclusion that the more school hours were used for work placements, the less cooperative other teachers were toward the NSSWT program. Both Pictou and Yarmouth were careful not to schedule work placements during school hours.

Table 2-10

Scheduling of work experience, by site and cohort

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Grade 11						
School hours	❷	●	❍	●	●	❍
After school	●	●	●	●	❍	●
Weekends	❶	●	●	●	❍	●
Summer	●	●	●	●	❍	●
Grade 12						
School hours	❷	❷	❍	❷	●	❍
After school	●	●	●	●	❷	●
Weekends/Holidays	●	●	●	●	❷	●
Summer	❶	●	●	●	❍	●

❶ = 1995 cohort only ❷ = 1996 cohort only ● = both cohorts ❍ = neither cohort

Note: "After school" includes evenings.

Source: Project coordinators' questionnaires and interviews

An essential parameter of the NSSWT program was to involve employers in the work experience component, including the design and implementation. In all sites, employers were involved in both the design and implementation of the work experience. At the same time, however, neither students nor parents were involved in any of the implementations, despite the fact that five of the six proposals indicated that students, parents or both would be involved in this part of the program.

The goal of the NSSWT program was to facilitate greater collaboration between the spheres of work and school. One possible mechanism for doing this would be to involve educators in the design of the work experience. In all six sites, proposals indicated that educators, such as school counsellors, would play such a role. In actuality, this task usually fell solely to the project coordinator hand in hand with employers. Other educators were not involved except in Halifax (where co-op educators were involved) and Truro (where the CNIEC agency played an active role).

One of the concerns in introducing a work experience program is finding enough employers. This is especially the case in a situation, such as the NSSWT program, where two work placements are envisaged for each participant. The project coordinator's workload is lightened to the extent that the same employers continue to be willing to participate in the program.

Reports by project coordinators indicated that finding placements took substantial amounts of time and energy in the first year. The design of the program (Eaton and Boyer 1995:30) noted that, "It is expected that the students will have the same job during Grade 11 and 12. However, it is possible that a student and an employer may wish to terminate their contract before the two-year period expired" and proceeded to indicate that such termination "should be the exception." For this reason and the build-up of a bank of employers, the task of finding employers willing to provide a work placement should become less onerous over time.

The project coordinators report impressive support for the NSSWT from the business community, as the following comments made in the focus group exemplify:

> One of the positive things was the support of the business community.
>
> Everybody, I think, can agree it was pretty outstanding. I thought they really came on board, took the ball and went with it.

One of the desirable but not essential parameters of the program was that employers pay students for their work. The program designers felt it was important that participants working for an employer be paid, reasoning that (Eaton and Boyer 1995:28):

> Paid work generates serious expectations of young people that unpaid opportunities cannot;
>
> Paid work increases employer ownership of the project and their commitment to provide meaningful assignments to young people.

The policy of the Nova Scotia Department of Education and Culture prohibits paying students for work during regular school hours that is performed as part of their education. For this reason, an honorarium was to be given to those participants whose work placement was during school hours, such as most participants in Truro. But it was recognized from the outset that this would be difficult to do in some instances.

A number of employers supported the NSSWT program but mentioned the pay issue as a barrier. One stated bluntly, "Other than paying the participants, we are in full support of this project." Some suggested possible ways of meeting this goal: "As we are a small business, our budget will not allow for remuneration at the time of training, but if the student is successful, there may be the possibility of paid spring/summer employment." A non-profit organization had this to offer: "As we are a non profit organization, we are not able to offer remuneration for the program, but we can provide the student with strong references should they complete their training successfully."

In the first year, project coordinators, in their communication with employers, indicated that payment of students or a contribution to an honorarium was desirable but not mandatory. They feared it would be too difficult to find sufficient numbers of employers if they were required to pay a wage. By the third year, none of the project coordinators asked new employers for any financial contribution.

The net result was that few participants received an actual wage. For example, in Sydney no one received either a wage or an honorarium, with the exception of a few 1996 participants in their second placement. Likewise, in both Halifax and Truro, less than a fifth of the participants received a payment or an honorarium. Although all participants in Amherst and Pictou received payment, it took the form of pooled honoraria, which came primarily from the school board rather than from employers. Only in Yarmouth did all participants receive wages from employers in both cohorts and for both work placements. Hence, it is the only site that fully implemented this non-mandatory parameter.

Participants' perspectives on work experience

Participants strongly endorsed the work experience component of the NSSWT program. Table 2-11 shows the percentage of participants who "very much" liked various aspects of their work experience. This table parallels that of Table 2-9 and a comparison of these two tables shows that the work experience component is more strongly endorsed than the in-school component.

Table 2-11

Endorsement (% who "very much" like) of features of the Grade 11 work experience, by site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
	%	%	%	%	%	%
The total length of the work experience component	47	37	34	36	70	48
The tasks you were given	40	37	52	41	52	55
The employer's support for the work experience component	53	59	59	59	70	66
The wage or payment you were given	60	13	31	18	9	41
The specific task-related skills you developed	40	39	79	41	52	62
The more general skills you developed	53	37	66	68	57	48

N=179

Source: Grade 11 student questionnaire, 1995 and 1996 cohorts (participant group only)

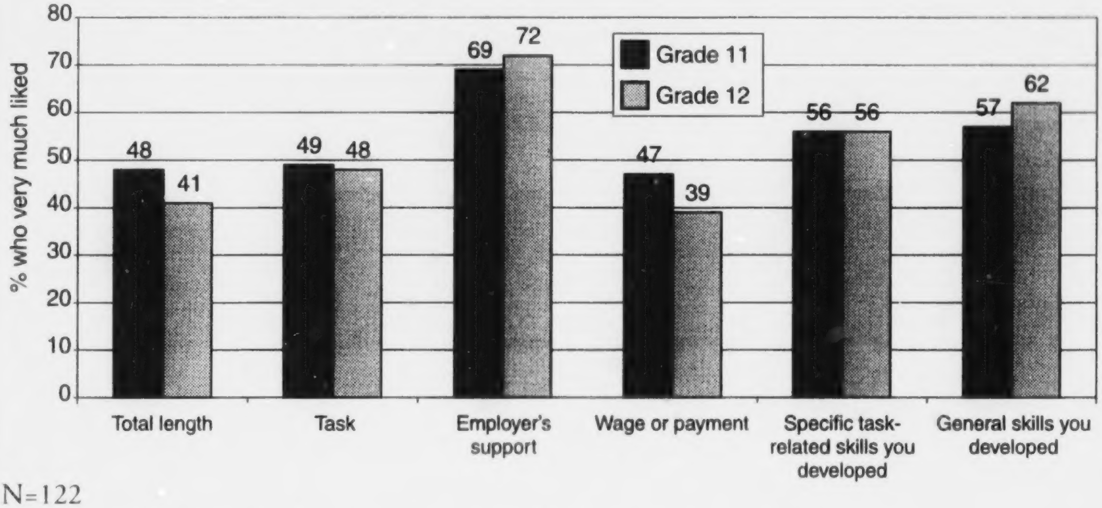
Site differences are not as pronounced as for the in-school component. Noticeable, however, is the lower endorsement in Halifax. Participants in Halifax were particularly less likely to strongly endorse the general skills they developed. This site also had the lowest percentage of endorsement on the issue of tasks assigned and related skills they developed.

Reaction to the wages was variable but predictable. As noted previously, Pictou and Amherst provided shared honoraria, and in Yarmouth most participants were either paid or received an honorarium. Participants in Amherst were most satisfied with the financial aspect. This is almost certainly due to two considerations. First, the co-op program at this site did not provide payment for its participants. Second, the honorarium paid at this site was higher than at the Pictou site. Also important to note is the much higher endorsement of the employer's support than the school's support for NSSWT. More than half the participants at all sites very much liked the employer's support.

From the participants' perspective, the key ingredient of the NSSWT program was the work experience. As shown in Figure 2-2, a high proportion of participants very much liked most aspects of the work experience. They particularly liked the employer support of the program. About 7 in every 10 participants liked this aspect of the work experience program very much. One of the objectives of the program was to develop transferable work skills among participants. It is, therefore, encouraging that this aspect received the second-highest endorsement.

Figure 2-2

Assessment of work experience component by year



N=122

Source: Grade 11 and Grade 12 student questionnaires, 1995 and 1996 cohort

Given that 46 percent of the participants received neither a wage nor an honorarium, it is to be expected that the issue of pay was the least liked facet of the work experience. A close second was the total length of the work experience. In addition, both the issue of pay and that of the total length of the work experience were somewhat less well received in Grade 12 than in Grade 11. This suggests that these two issues were particularly problematic in the final year of high school.

There is little evidence to indicate that the work experience in the second year was either better or worse than in the first. Using the same summary measure of endorsement as described above, for two in every five participants the second year's work experience was better liked than the first. About the same proportion (42%) found it worse, and the remainder gave identical ratings in the two years. Note that, despite the fact that many participants (46%) had the same employer for both of their work experiences, they responded more variably to this than to the in-school component. That is, they were about half as likely to endorse it to the same extent both years.

As with the in-school component, the same aspects of the work experience that were liked in the first year were also liked in the second year, and vice versa.

Participants were also asked how well the in-school and work experience components fit together. Substantial room for improvement was noted: in Grade 11 only about two in five (41%) participants felt the two components fit together very well. Even less (3 in 10) felt this way in Grade 12.

Grading

As required by the program parameters, in all sites the mark assigned to SWT11 and SWT12 is composed of separate evaluations of the in-school performance and the work experience. The relative weight of the two components was left to the discretion of the project coordinator. The work experience weight ranged from 60 to 80 percent of the total mark. In consequence, the in-school component was worth between 20 and 40 percent.

A number of criteria are possible for deciding on the relative weights for the two components. A simple criterion would be to preserve the relative number of hours spent in the two components. If that were the criterion, the weight of the in-school component would range from a low of 12.5 percent (for those sites like Pictou that have a 20-hour in-school component and 140 hours of work experience) to a high of 29 percent (for Yarmouth in those years in which it had 60 hours of in-school and 150 hours of work placement). Several project coordinators noted that the length of the two components was a consideration in determining their relative weight.

The Sydney site consistently chose to weight the work experience component at 60 percent, which was substantially less than the weight given at any other site. The next lowest work experience weight was in Halifax, where three quarters of the mark was based on the participants' performance in their work placements. All other sites chose to weight the work experience at 80 percent, although the Yarmouth site, perhaps in recognition of the length of its work experience, increased the weight to 90 percent in the final year.

Employers/supervisors rated participants on seven generic skills (see Table 2-12).

The seven generic skills are almost equally relevant to the educational sphere as to the world of work. That is, skills such as problem-solving proficiency, communication, and planning and organization are also essential for academic success. Others, such as initiative, dependability, positive attitudes and effective cooperation certainly contribute to success in life, whether personal, academic or occupational. It thus seems reasonable to conclude that the work experience has a curriculum component relevant for entrance to post-secondary institutions.

Table 2-12

Employer rating form for generic skills

1. **Communication:** Asks questions when having difficulty. Ability to express ideas orally and in writing.
2. **Dependability:** Degree of supervision required; thoroughness, promptness and drive in approaching a task. Decision making; stability under pressure.
3. **Attitude:** Willing, interested and enthusiastic. Accepts suggestions and criticism.
4. **Cooperation:** Effective working relationship with others.
5. **Planning and organization:** Able to plan and organize work and time. Able to use resources to meet group objectives. Judgement and flexibility in addressing priorities.
6. **Initiative:** Continues assigned tasks without supervision. Seeks additional work.
7. **Problem Solving Proficiency:** Able to solve job-related problems. Capable of creative, alternative techniques.

Comparison of School-to-Work-Transition marks with other marks

An important task is to assess how the marks participants obtained in this program compare with the marks they received in other courses. The comparisons are intended to answer three questions.

- Do the School-to-Work-Transition marks compare favourably with marks obtained in other courses? The answer to this question is obtained by comparing the average SWT mark with those from other courses.
- How much do School-to-Work-Transition marks differ between the various participants? This can be assessed by measures of dispersion, such as the standard deviation or the inter-quartile range (the "spread" in marks between the 25th and the 75th percentile).
- Do participants who perform well in various academic subjects tend to also do well in School-to-Work Transition, or are completely different skills involved? Various statistical measures of association, such as the Pearson correlation coefficient, can help answer this question.

The information contained in Table 2-13 is relevant to all three questions. It shows that the median (50th percentile) marks are substantially and consistently higher in SWT than in English, mathematics and the overall grade-point average (GPA). In both Grade 11 and Grade 12, the median SWT mark is at least 12 points higher than the other three marks to which it is compared. This could be due to either lenient marking, or to enhanced performance in the School-to-Work-Transition program.

It is difficult to provide solid, objective information about the relative merits of these two interpretations. However, from interviews conducted with participants and their parents, there is little doubt that participants were substantially more interested and more engaged in the School-to-Work-Transition course than in many of their other subjects. On the other hand, participants also indicated in their questionnaire responses that the School-to-Work-Transition course was easier than most of their other classes. This is of concern because, should the School-to-Work-Transition course get a reputation for being easy, it may attract participants for the wrong reason.

Turning to the second question, there is substantially less variation in the School-to-Work Transition marks than in the marks obtained in other classes. The inter-quartile range (75th percentile – 25th percentile) is 11 points in both Grades 11 and 12. That

Table 2-13

25th, 50th and 75th percentile of marks obtained in SWT, English, mathematics and GPA by year (participant group only)

	25th Percentile	50th Percentile	75th Percentile	Pearson Correlation	N
Grade 11					
SWT	79	84	90	—	207[a]
English	63	72	81	0.34	205
Mathematics	56	67	77	0.22	196
GPA[c]	64	71	80	0.38	207
Grade 12					
SWT	80	86	91	—	122[b]
English	62	72	83	0.34	120
Mathematics	57	65	78	0.43	104
GPA[c]	62	71	80	0.45	122

[a] Grade 11 SWT marks were not ascertained for three participants.

[b] Grade 12 SWT marks were not ascertained for four participants.

[c] Excluding SWT

Source: High school transcripts, 1995 and 1996 cohorts

is, an 11-point difference in marks separates the middle 50 percent of participants. This compares with a 21-point difference in both English and mathematics in Grade 12 and a similar spread (18 and 21 points) in Grade 11. A large part of the reason for the smaller spread is due to there being very few low marks in School-to-Work Transition. When this issue was raised in a focus group with the project coordinators, they all agreed that many employers found it difficult to give low marks to the participants. The main reason is that they were indeed very pleased with the students' workplace performance. The employer/supervisor satisfaction with the participants placed with them is substantiated in their responses in the questionnaire they filled out after the completion of each work placement.

The Pearson correlation coefficient is a statistical measure of association that is suitable for summarizing the extent to which the marks in one subject are similar, or predictable, from marks in another subject. A coefficient of 0.0 between two subjects indicates that knowing the mark in the one subject would not help predict the mark in the other subject at all, assuming certain technical assumptions are not violated. In contrast, a coefficient of 1.0 would mean that the mark in the second subject is perfectly predictable from the mark in the first subject. The second-last column of Table 2-13 shows low to moderate associations (Pearson coefficients ranging between .22 and .45) between School-to-Work Transition marks and other subjects. It appears that students who do well in School-to-Work Transition tend to do well in their other subjects.[8] Study habits, interest in school and academic ability are likely the source of these similarities.

Connecting with community

Research team contact with partners

Although the task of forging links with partners was placed primarily in the hands of project coordinators, the case studies may also have been instrumental in this respect. In the first two years of the program, the case study researcher conducted focus groups with parents, educators and employers at each of the sites (see Table 2-14 for attendance details). Those attending the focus groups were given the opportunity to ask questions and to make suggestions.

Invitations to the focus group meetings were extended to all parents. Attendance at them might be a barometer of the need they felt for more information about the program. If that is correct, then it follows that parents felt the need for information most acutely in the first year of the program. This is corroborated by their remarks in the first year, where the program was criticized to some extent for not having involved the parents sufficiently nor giving them enough information about the program. In all sites, parental attendance at the focus groups diminished in the second year.

In most sites, employers were selected and invited by the project coordinator to participate in a focus group with the case study researcher. Hence, the number of employers attending is a reflection of neither their need for information, nor their interest in the program. The focus groups nevertheless represented an additional opportunity for them to influence the development of the program.

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[8] One would expect the associations among traditional academic subjects to be higher than that between SWT and such subjects, and indeed they are. As a point of comparison, in both Grade 11 and Grade 12, the Pearson correlation between English and mathematics marks is .50, which is higher, albeit not dramatically, than between SWT and either English or mathematics.

Table 2-14

Number of parents, educators and employers attending a NSSWT focus group by year and site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Parents						
First year	12	11	5	4	8	7
Second year	4	7	2	3	1	1
Educators						
First year	6	6	5	6	3	6
Second year	7	7	8	6	10	12
Employers						
First year	2	2	2	3	3	3
Second year	N/A	N/A	N/A	N/A	N/A	N/A

Note: N/A = Not Applicable

Source: First- and second-year case studies

Likewise in the first year, teachers were selected and invited for individual interviews. Between three and six teachers were interviewed at each of the sites. In the second year of implementation, all teachers in the participating schools were invited to participate in a focus group with the case study researcher. In sites where an insufficient number of teachers volunteered to participate, the principal or project coordinator approached specific teachers requesting their participation. The number of teachers attending the focus groups ranged between 6 and 12. In addition to the research purposes of the interviews and focus groups, they served to better inform educators about the nature of the NSSWT program.

No focus groups were conducted in the third year. Instead, 16 participants, at least two from each site, and their parents were interviewed in depth about their experience of the NSSWT program (Thiessen 1998d).

One of the parameters of the NSSWT program was that "school boards must form significant partnerships with their community – employers, parents, students and others as deemed necessary" (Eaton and Boyer 1995:7). Although the emphasis is on the school board, in practice it falls to the project coordinator to forge these links – at least at the informal level.

Additionally, one of the desirable program parameters was to "ensure on-going interaction among partners, particularly between employers and schools" (Eaton and Boyer 1995:7). Table 2-15 provides relevant information about such interaction. Visits to the actual work placement sites were frequent in all implementations, with between four and six such visits being the norm. Less frequent (except in Sydney) were telephone calls from the project coordinator to the employer. Taken together, the frequency of these contacts was such that it clearly limits the possible number of participants. That is, even if finding placements were not an obstacle (and it does not seem to be) the time required to maintain the necessary contact is a severe constraint.

Table 2-15

Average contact with parents and employers, per participant, by site (1997-98)

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Parent: in person	0.6	0.0	0.0	4.2	0.3	1.0
Parent: telephone	1.1	2.1	1.0	3.8	1.3	1.0
Employer: site visit	6.0	Bi-weekly	6.0	3.6	4.0	3.0
Employer: telephone	0.0	0.7	3.0	3.8	3.0	2.0

Note: The denominator for the calculation of the averages is the number of participants who had a second work experience.

Source: Project coordinators' questionnaires

Contact of the project coordinators with parents is usually less frequent than with employers (Sydney is the sole exception), at least in the final year of the program.

Another way of cultivating and strengthening contacts is to provide tokens of appreciation to employers and in-school presenters. Thank-you notes or cards and NSSWT coffee mugs are frequently used to show appreciation. Truro had the most extensive recognition program, while it was least developed in Sydney.

Relationship with the host school

To be an effective option, and to enjoy long-term viability, requires that the NSSWT program cultivate a good relationship with the participating schools. Ongoing contact with school personnel is one aspect of this. The six sites differed quite dramatically in the amount of contact the project coordinators had with principals, teachers and school guidance counsellors. Two structural factors – the teacher status of the project coordinator and the number of participating schools – appear to account for a substantial proportion of the variation.

The first important factor is whether the project coordinator is a licensed teacher. This is the case in both Amherst and Truro, which had the two highest rates of contact. In these two sites, the project coordinators were in daily contact with either principals or teachers. In contrast, the project coordinators in Halifax, Sydney and Yarmouth, who were not teachers, had less than 10 such contacts in the whole 1997-98 school year. The Pictou site, however, does not fit this pattern, but reflects the second structural factor – the number of participating schools. In both the Halifax and the Pictou sites, participants came from several schools (four in Halifax and seven in Pictou). It appears that being responsible for students from a number of geographically dispersed schools hinders contact with school personnel; the average contact with teachers and/or principals was once a week at most.

The NSSWT program had a mixed reception from teachers in the participating schools. In all sites some teachers responded negatively, although more so in some schools than in others. One project coordinator commented:

> Students tell me that they are treated differently because they are in this program. I made a point when I put out a newsletter of not identifying the students. I didn't identify students by name because what started to happen is that they would treat such students with bias.

To which another project coordinator chimed in, with obvious relief that the reports of other occurrences of such behaviour meant he was not at fault:

> It's kind of heartening for me to hear others having the same concerns.

In some sites, notably Halifax and Truro, the project coordinators developed a healthy relationship with the guidance office (the project coordinators reported having 13 and 18 such meetings, respectively, in the third year). In other sites, such as Sydney and

Yarmouth, contacts with the guidance counsellors remained underdeveloped, with no more than four such contacts in the final year of the program.

Regardless of the amount of contact the project coordinator has with school personnel, it would be advantageous to have widespread visibility within the school, active cooperation by teachers and an opportunity to apply classroom learning to workplace problems.

Understandably NSSWT activities appeared to be most visible in Truro and Amherst, since these were the two sites that most often used classrooms in their high school for delivery of the in-school component. The project coordinators in these two sites reported that all teachers were aware of the program and that most of them would go out of their way to accommodate participants. The program was also reported to be quite visible in the Halifax site; the project coordinator estimated that a majority of teachers were aware of the program. Although the project coordinator in Sydney estimated that three quarters of the Memorial High School teachers were aware of the program, she feels that only 1 in 10 actively supported it.

There is some indication that teachers were less embracing of the NSSWT program in those sites where the project coordinator was not a teacher, namely Halifax, Sydney and Yarmouth. In Sydney, this fact led the Nova Scotia Teachers Union to threaten to lodge a grievance. Likewise, in Yarmouth, the project coordinator estimated that only 3 in 10 teachers would go out of their way to accommodate students in the program. The Halifax project coordinator reported the highest number of instances of teachers making participation in the NSSWT program more difficult.

The case studies, as well as the project coordinators' impressions as recounted in meetings with the researchers, pointed to missed class time as the primary and major irritant in teachers' reactions to the program. Some teachers were not inclined to accommodate students in situations where they missed class to complete some aspect of the NSSWT program (typically to complete their work placements). Halifax and Truro were the two sites with the highest number of reported instances of such problems. It is also in these two sites that participants were most likely to miss scheduled classes to fulfil their NSSWT obligations.

Nevertheless, the program may have encouraged some teachers to link classroom instruction with the world of work. Project coordinators, especially in Halifax and Pictou, reported numerous instances of teachers coming to them to discuss how that could be done.

Employer participation

Obviously, programs that require work placements cannot succeed without the active participation of employers. In the first two years of implementation of the NSSWT program, the potential difficulty of getting employers to take on participants was clearly a concern and a factor in the decision of how many applicants to accept into the program. Over time, this concern eased as a bank of potential employers was developed. Indeed, by the final implementation year, most project coordinators estimated it took them less than half an hour, on average, to arrange each work placement. In most sites, students were able to get a placement with their first choice of employment. This was true, for example, for 50 percent of students in Truro and 100 percent of students in Sydney during the second cohort.

The intention of the NSSWT program was to have participants remain with the same employer for both of their work placements. This was felt to provide the best way to acquire relevant skills. But as Table 2-16 shows, some participants in the second cohort in all of the sites had a new employer for their second work placement. The sites were quite varied in this respect. Participants in Halifax were most likely to stay with the same employer, while those in Amherst were least likely to do so.

A variety of indicators of the ease/difficulty of work placements are given in Table 2-16.

Four patterns emerge from this table. First, in year one, few employers were willing to take on more than one student. On average, employers took 1.1 placements (101 placements among 92 employers). Site variation in this ratio is minimal, to the point of being a near constant.

Second, in the first cohort, only 36 out of 84 participants continued their previous placement. Clearly, changing work placements was not just done in exceptional cases. Substantial variation exists in this respect. Pictou and Truro had very few continuations; Halifax had the most, with two in every three placements being a continuation.

Third, one year into the program, the placement/employer ratio had already improved substantially. Now, on average, each employer took on almost one and a half students (123 placements among 83 new employers). Halifax was the only site that did not show substantial improvement in the placement/employer ratio. The overall improvement in the placement/employer ratio also suggests that as employers gained experience with the NSSWT program and its participants, they endorsed it more.

Table 2-16

Number of placements, continuing placements, employers and new employers by cohort and site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth	Total
1995 cohort 1st placement							
Number of placements	19	22	12	12	23	13	101
Number of employers	15	21	10	11	22	13	92
1995 cohort 2nd placement							
Number of placements	15	21	11	12	13	12	84
Number of continued placements	5	14	2	6	3	6	36
Number of new employers	6	5	7	5	6	5	34
1996 cohort 1st placement							
Number of placements	20	25	18	19	24	17[a]	123
Number of new employers	10	21	14	14	15	9	83
1996 cohort 2nd placement							
Number of placements	12	18	17	8	9	3[b]	67
Number of continued placements	1	16	8	3	3	2	33
Number of new employers	3	1	7	3	5	1	20

Note: The *Number of new employers* plus the *Number of continued placements* does not add up to the *Number of placements* because some employers who had previously participated took on new students.

[a] Excludes two participants who were employed in private homes

[b] Excludes two participants who were self-employed

Source: Project coordinators' questionnaires and interviews

Finally, in the last year of the program, about half the placements (33 out of 67) were continuations, which is somewhat of an improvement over the first cohort's experience. Nevertheless, continuations of placements are still substantially less frequent than originally anticipated. Amherst was particularly low (1 in 12 continued his or her placement) and Halifax was especially high in this respect (16 out of 18 placements were continuations).

Taken together, these patterns show why placements became less time consuming. Additionally, of course, the attrition from the program meant that fewer second placements than first placements had to be found. Continuity with the same employer also reduced the need for additional placements.

The reasons for switching employers were diverse. In a very few instances, the employer was not satisfied with the participant and it was agreed to find an alternative placement. In most instances, it was the participant who wanted a new placement. Sometimes, that was because their occupational expectations had changed and they wanted a placement that matched their new aspirations. Sometimes, it was because they felt that they had learned all that they could realistically learn from their first work placement. Finally, sizable numbers wanted to increase their chances of converting their NSSWT work placement to a paid part-time or summer job. This prompted them to switch employers when they perceived that it was unlikely that their current employer would have such a position available for them.

It is understandable that participants would try to maximize their likelihood of obtaining paid future employment through their NSSWT work placement. At the same time, this dynamic works against some of the program objectives, since congruence with occupational expectations no longer remains the primary ground for the work placements.

Career-guidance services

As indicated earlier in this chapter, in most sites more students applied to the program than could be accepted. This indicates a demand greater than current capacity. What alternative sources are there for those who could not be accommodated by the NSSWT program, and what alternative sources would there be if the program were not continued? Table 2-17 shows what kinds of career-guidance services are usually available in each of the participating schools. Some schools provide an impressive number of services, while others are more sparse. The first line of the table (number of full-time equivalent counsellors), however, gives a telling story. In light of the fact that most of these schools have a high student population and because guidance in course selection and personal counselling are included in the activities of the counsellors, it is clear that the career-counselling services are generally inadequate.

Table 2-17

Career-guidance services available by site and school (1995-96)

Site	Amherst	Halifax				Pictou							Sydney	Truro	Yarmouth
School		1	2	3	4	1	2	3	4	5	6	7			
Number of full-time equivalent counsellors	1.5	2	2	2	2	1.5	1.5	0.6	1	0.5	1	0.5	2.5	2.5	1
Written/computer inventories to determine career services	●	●	●	●	●			●	●	●	●	●	●		●
Job fairs	●	●	●		●		●	●	●		●		●		●
Practice interviews		●	●	●		●		●			●				●
Instruction on writing résumés	●	●	●	●	●	●	●	●	●	●	●	●	●		●
School-arranged job interviews		●									●				●
School-arranged visits to business/industry	●	●	●			●	●	●	●		●		●	●	●
Job shadowing/mentoring		●	●	●			●	●	●	●	●		●		●
School-arranged visits to business/ industry at school		●	●	●	●	●	●	●	●		●	●	●	●	●
Career placement	●	●	●		●	●		●	●		●	*	●		
Job search	●	●	●	●	●	●			●		●	*	●	●	●
CHOICES	●		●						●	●					
Career and occupational information resource centre		●						●		●					
Career Options										●					

● indicates that the guidance service was offered at that school

* Information was not available about this service at this school.

Note: Four schools participated in the program in the Halifax site indicated by the numbers 1 to 4 and seven schools in the Pictou site indicated by the numbers 1 to 7.

Source: Interviews with school guidance counsellors

Summary and conclusions

As documented in this chapter, the six implementations differed in many ways. Even within a given site, the program often differed between the two cohorts. Some differences may be inconsequential, others not. This will prove to be a difficulty for isolating specific factors responsible for successful interventions. On the other hand, the differences provide an opportunity for showing how, despite numerous dissimilarities, the programs were, for the most part, successful in meeting many of the parameters of the overall NSSWT program.

Program

This chapter presented an overview of both the design of the NSSWT program in the different sites, as well as details of the way it was actually implemented. As shown, a considerable gap developed between the ambitious programs envisaged in the original proposals and the reality of what each site was able to offer.

The fact that the program failed to generate sufficient student interest to permit random assignment in the majority of instances is significant. It suggests that either the demand for such a program is not particularly great, or that the promotion of it did not capture the interest of students. At the same time, the program attracted enough applicants to meet the target for each site. This indicates sufficient demand to warrant the program.

Of particular note is that young women were about twice as likely as young men to be attracted to the program. This fact must be kept in mind throughout the analyses, since the program may serve different functions for females and males. Regardless of gender, the majority of applicants expected to attend university after completing high school. Few planned to enter the full-time labour force and most were sure of their post-high school plans.

In-school component

An impressive variety of classroom material for the in-school component was developed and used. Some topics, such as career exploration, were covered in all sites. Other topics, such as information management and personality assessment, were unique to a given site. The total length of the in-school component varied between 20 and 60 hours per year but converged in the vicinity of 25 hours. These were structured as a combination of workshops and classes.

From the participants' point of view, the less similar the in-school component was to a typical classroom, the better it was received. This meant, for example, having non-classroom venues and emphasizing workshops leading to certificates. Since in the majority of sites the School-to-Work-Transition class was not integrated into the regular timetable, many difficult timing arrangements were used, such as Saturdays, lunch hours, evenings and in-service days. Participant reception of the in-school component was outstanding in Pictou, moderate in Amherst, mixed in Truro and Yarmouth, and low in Sydney and Halifax.

Although many partners helped design the in-school component, both students and parents were, to a large extent, absent from both the design and implementation of the in-school component. Similarly, employers were intended to help design and deliver the in-school curriculum, but their involvement in both was less than anticipated.

Work experience component

In all sites, employers were involved in design and implementation of the work experience component, as well as in the assessment of the grade. Parents and students, however, were not involved in the design and implementation of the work experience despite the fact that most of the proposals promised such involvement.

The work experience component was especially well received in all sites. Site differences in participant endorsement of the work experience were not large, although the Halifax participants seemed less satisfied than others with the tasks assigned and skills learned.

The work placements were 140 hours in length in each of the two years (except in Yarmouth where it was up to 200 hours long). To complete these hours, the work experience was scheduled to occur on weekends and holidays, after (and during) school hours, as well as during the summer. The heavy time commitment in Grade 12 resulted in some participants using the summer prior to Grade 12 to do their second work placement.

Payment of participants for their work experience was a sensitive and contentious issue. Although in three sites (Amherst, Pictou and Yarmouth) all participants were either paid a salary or received an honorarium, much of the money did not come from the employers themselves. In sites where the participants were not compensated, they voiced their dissatisfaction with this arrangement.

It is the program, as implemented in these different sites, that will be examined in terms of student outcomes. First, it is important to get a clear view of the students who participated in the program at these six sites. The next chapter provides an introduction to these students and to the members of the comparison group who participated in the research component of the project.

Some key features associated with each site observed by the authors are highlighted in Table 2-18.

Table 2-18

Key features of the sites

Site	Key features
Amherst	The school took a particularly strong leadership role, with less involvement of partners from the community. The in-school component of the program differed substantially for the two cohorts. There was high variability in the marks assigned to the different participants in the NSSWT class.
Halifax	The four participating schools are located in typical suburban communities and enjoy access to the urban-labour market. A high level of integration with the co-op program characterized both the in-school component and the work placements.
Pictou	Participants from seven rural schools sacrificed certain Saturdays for their in-school component, fostering a strong sense of group identity. The in-school component used workshops effectively and they were well received by the students.
Sydney	The program is located in an economically struggling area on Cape Breton Island. The in-school component was coordinated by a different person from the one in charge of the work placements. A community development officer with strong ties to the local business community but with fragile acceptance by the school/teacher community was in charge of the work placements.
Truro	The in-school component was integrated into the school's curriculum. Work placements occurred during school hours requiring participants to miss other classes on certain days.
Yarmouth	This was by far the most ambitious implementation in both the in-school and work experience requirements. It had an exceptionally active local management committee that maintained its involvement throughout the length of the program.

3 PARTICIPANTS

This chapter examines the characteristics of the students who participated in the research project, either as program participants or as members of the comparison group. The purpose is to (a) establish the comparability of the two groups, (b) provide baseline data on students for the discussion of outcomes, (c) indicate the role that parents play in the career decision-making process, and (d) identify relevant subgroup differences. Data from the two cohorts (1995 and 1996) are combined since a preliminary analysis showed few significant differences on any relevant variables.

Background characteristics

Before evaluating the effects of the program on the youth who participated, it is important to have an idea of what they were like before they started the program. Researchers know that gender, class and school performance have an impact on young people's educational and occupational decisions (Andres et al., in press). Given this fact, it is important to document not only the effects of participation, but also the subgroups of students who would best benefit from such a program.

At this stage, it is important to document both the similarities and the differences between the participants and those in the comparison group to make sense of subsequent differences in outcomes. For this purpose, students were surveyed at the beginning of their Grade 11 academic year. Table 3-1 shows some of the background characteristics of the youth in the two groups.

Table 3-1

Characteristics of students by participation status

	Participant	Comparison
Percent female	64%	65%
Average number of siblings	1.9	1.9
Has a sibling at university	24%	21%
Has a sibling at community college	12%	11%

N=579 (participant=289; comparison=290)

Source: Initial student questionnaire, 1995 and 1996 cohorts

It should be emphasized that almost two thirds of both groups were female. In all but one of the sites more females than males applied to and were accepted into the program. Since the transition from school to work is often different for women than men (Looker 1993; Looker and Magee 1998), it is important that equal numbers of women were in the comparison and participant groups. Where relevant, gender differences in the patterns of responses are noted to help us understand the relevance of the program to young men and women.

The important point here is that both groups have an "over-representation" of females. In those sites with insufficient applicants to the program to permit random assignment to the two groups, students were chosen so that the comparison group would match the participants in terms of gender and post-high school plans. In other words, some of the initial comparability of the two groups of students was explicitly built into the sample design. For the purposes of this part of the analysis, it is the comparability of the two groups that is central.

Students in the two groups had a similar number of siblings and, what is probably more important, similar numbers of their siblings had attended university and/or community college, serving as potential role models for their younger siblings.

Table 3-2 shows that the parents of the two groups of students had similar employment patterns. In both groups, more fathers than mothers were working full time, and one in five mothers was a full-time homemaker. This table also reveals an important difference in the social class backgrounds of the participant and comparison students. Specifically, the parents (especially fathers) of the comparison students were more likely to have attended university than their participant counterparts. Likewise, more youth in the comparison group had fathers in professional and managerial positions; while more participants had fathers in crafts and trades. Together, these differences lead to the conclusion that more students in the comparison group came from higher-status homes. Since social class background is known to affect academic performance and educational plans, differences between the participant and comparison groups can be expected in these areas as well.

Table 3-2

Parental background of students by participation status

	Father		Mother	
	Participant %	Comparison %	Participant %	Comparison %
Employment status*				
Full-time	66	67	40	48
Part-time	8	13	25	21
Other employment	17	24	13	17
Not employed	20	12	26	18
Full-time homecare	5	0	20	20
Parental education				
High school or less	51	46	49	43
Non-university	35	22	32	34
University	15	30	19	23
Type of occupation				
Professional/managerial	24	33	27	29
Technical/semi-professional	7	10	14	12
Clerical, sales, service	13	13	41	50
Crafts & trades	50	40	9	3
Unskilled	7	4	10	6

* Respondents could choose more than one current activity so percentages do not add to 100 percent.

N=579 (participant=289; comparison=290)

Source: Initial student and initial parent questionnaires, 1995 and 1996 cohorts

Schooling

Having established the background of the students, it is now relevant to assess the school experiences of the two groups.

Most students in both groups, and more young women than men, said they liked school. Overall, about a third (29% of participants and 32% of the comparison group) liked school very much and another 59 percent said they liked it somewhat. Less than three percent reported they did not like school at all. Virtually all of them (99%) had attended only one school in the last three years (not shown).

Almost all of the students in both groups were in the university preparatory classes for both Grade 10 English (94%) and mathematics (92%). A handful (2%) were taking Grade 11 English in Grade 10; 1 percent did the same with mathematics.

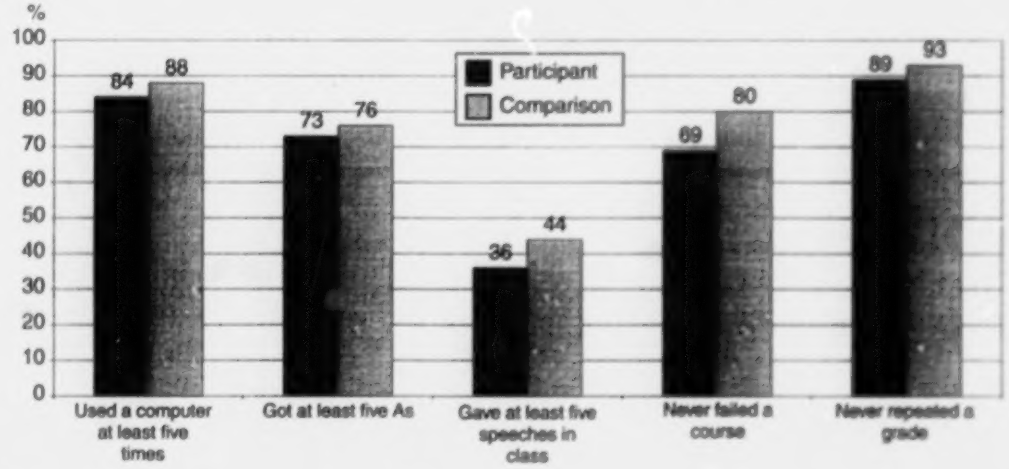
On the basis of their social background, one would expect the school performance of the comparison group to be better than that of participants. The evidence points to small, but consistent, differences between the two groups in these areas. Although the average marks in Grade 9 were comparable (77.1 for the participants and 78.7 for the comparison group [not shown]), by Grade 10 the comparison groups did somewhat better, an average of 75.3 compared to 72.4 for the participants.

A similar advantage of the comparison over the participant students can be seen in their other academic experiences in the previous three years (see Figure 3-1). Slightly more in the comparison group than in the participant group frequently used a computer, frequently achieved top marks or often gave speeches in class. On the opposite end, participants were somewhat more likely to have repeated a grade and significantly more likely to have failed a course.

In many of these respects, there was also a gender difference, with girls getting higher marks in school and boys more likely to fail a course, for example.

Figure 3-1

Academic experiences in previous three years by participation status



N=579 (participant=289; comparison=290)

Source: Initial student questionnaire, 1995 and 1996 cohorts

The greater "cultural capital" among comparison-group parents may trickle down to the generic skills, such as communication and problem-solving skills, of their children. Such skills are also related to academic performance, and it has already been shown that comparison students performed somewhat better than participant students in this respect. For both of these reasons, it is likely that the two groups will differ in the generic skills they believe they possess.

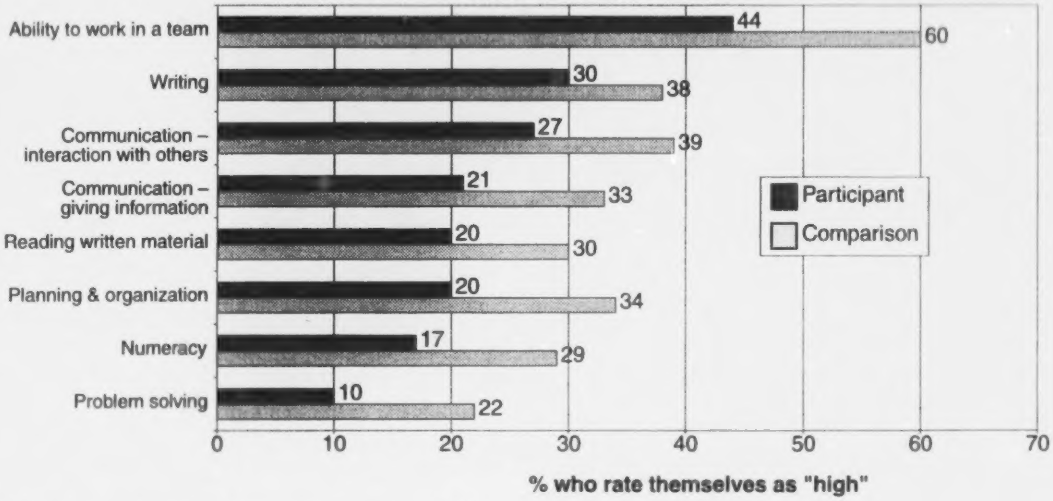
The students in the 1996 cohort were asked to rate themselves on a variety of these skills. Figure 3-2 reveals some consistent differences between the participants and the comparison group. As expected, those in the comparison group rated themselves higher than the participants in all the skills listed in this figure. This difference is important when outcomes are examined.

There were also some gender differences in the responses to this set of questions; young women reported higher levels of writing skill and higher levels of skill in planning and organization.

School counselling services seem naturally suited to provide links between school and career. Were these services used for such purposes, and were they used to the same

Figure 3-2

Self-rating on skills (1996 cohort) by participation status



N=281 (participant=142; comparison=139)

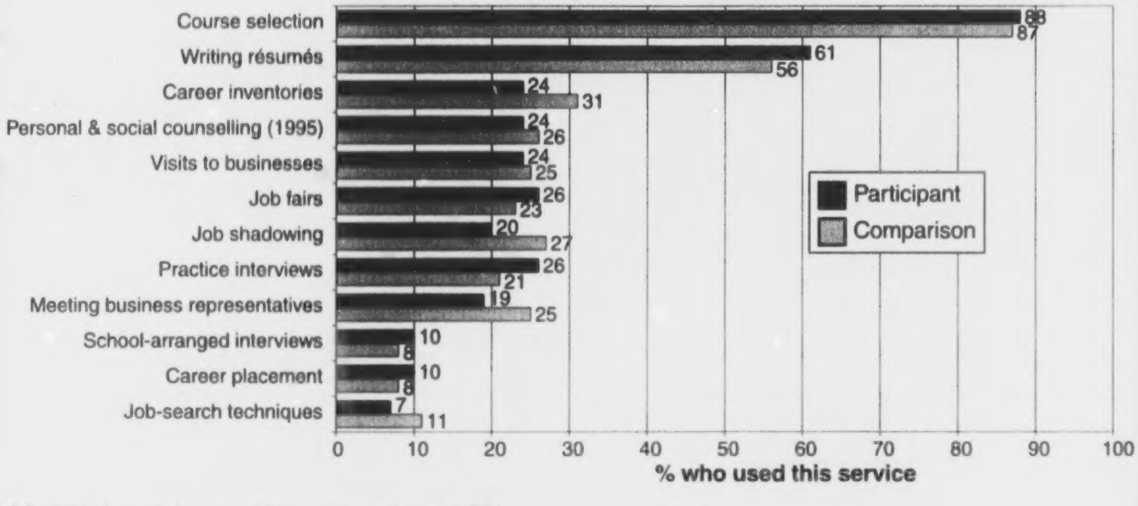
Source: Initial student questionnaire, 1996 cohort extent by participant and comparison students? The answer to the first question is relevant for assessing the extent of the need for a program such as the NSSWT program. The second question addresses the issue of the prior comparability of the two groups of students.

Most students had used the counselling services of their school at least once in the past three years (72% for participants and 65% in the comparison group [not shown]). But such use was not extensive: a third said they had never used these services in the past three years; almost half (46%) have used them only once or twice. Overall, young women reported more use of counselling services, particularly for personal and social counselling and for course selection. Figure 3-3 gives a more detailed picture of the students' use of these services.

Figure 3-3 shows that the most frequently used service was that for course selection; 88 percent of the students reported using this service at their school. Close to 60 percent (61% of participants and 56% of the comparison group) had experience writing résumés, a skill that would be further developed in the in-school component of the NSSWT program. Fewer than a third of the students reported using any of the other

Figure 3-3

Use of career and counselling services, by participation status



N=579 (participant=289; comparison=290).

Source: Initial student questionnaire, 1995 and 1996 cohorts

services, despite the fact that most of these were offered in their schools. Ten percent or less had school-arranged job interviews, career-placement counselling or instruction in job-search techniques. There were no group differences in the responses to this set of questions.

Other data (not shown) identified those students who did not know if their school offered these services. Virtually all (95%) of the students said they knew their school offered counselling in course selection. Over 80 percent said they knew about the presence or absence of job shadowing and guidance on résumé writing. However, between 25 and 54 percent said they did not know whether their school offered other types of career-guidance services, such as job-search techniques and career inventories. The NSSWT program has the potential not only to make more of these services available to students, but also (if it achieves its goals) to make them more visible to the entire student body.

The important point for the current analysis is the lack of any significant differences between the comparison and the participant groups. The two sets of students reported similar experiences in school. Both used certain types of counselling services (such as course selection) and not others (specifically work-related ones).

Finally, there is information on how the students rated some of these services; however, this information is available only for the 1995 cohort.

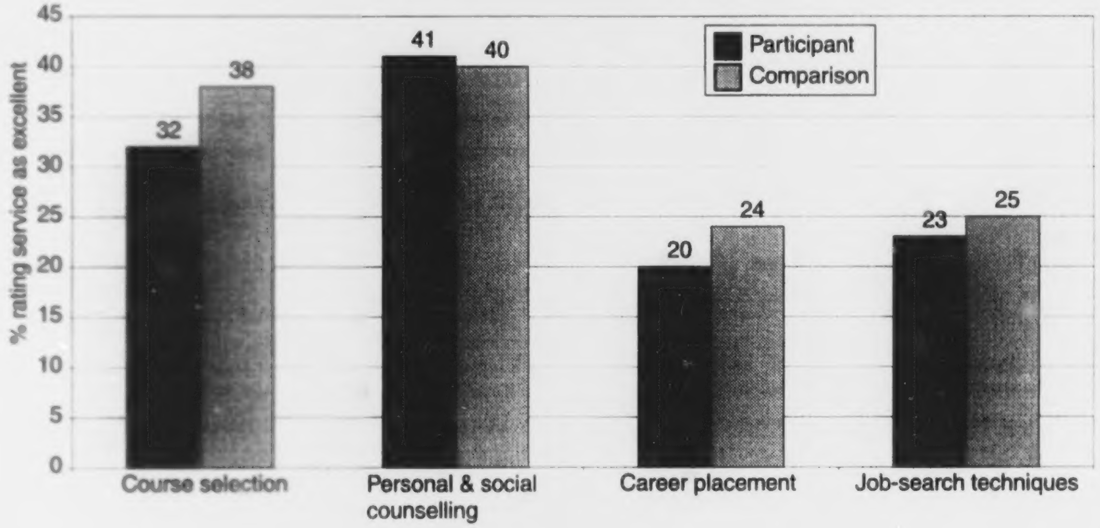
Overall, the responses to this question suggest that about 20 to 40 percent of the students rated each of these services as excellent (see Figure 3-4); more than half rated them as good (data not shown); less than three percent rated them as poor; and between a quarter and a third said they did not know enough to rate any of these services, except course selection. The rating of the services was similar for the comparison and participant groups.

These results suggest that there is room for improvement. It is clear that students in both groups relied heavily on the school's counselling services for course selection in high school. Few used these services at this point in their high school career for decisions about post-secondary courses, or for personal, social or job-related counselling. These findings point to a need for expanded services in some schools, and increased visibility of the services that are available to help prepare students for their time beyond high school.

The question is whether the NSSWT program had an impact on the students' exposure to these services. These baseline data show that participant and comparison students

Figure 3-4

Rating of counselling services by participation status (1995 cohort only)



N=200 (Case base varies because of the exclusion of the "do-not-know" responses)

Source: Initial student questionnaire, 1995 cohort

were very similar in their use of, knowledge about and perceptions of the career-guidance services at their schools.

Prior paid- and unpaid-work experience

To assess the effects of the work experience component of the NSSWT program, it is necessary to have an idea of the work experience, inside and outside school, which these young people bring to the program. It is important to note that more than 9 in 10 students in each group reported having a paid job of some sort in the three years prior to Grade 11. About three-quarters (77%) had a paid job in the previous 12 months. Data from the 1995 cohort[1] indicate that many (over 80%) had work from self-employment, often babysitting or "odd jobs." Over two thirds of the students in both groups and both cohorts worked for an employer. About half of these had only one employer; 17 percent had three or more different jobs (not shown).

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[1] This question was not asked of the 1996 cohort.

These students also gained work experience by volunteering. More than half (55% of the participants and 58% of the comparison group) had done some volunteer work in the last three years. Overall, however, more of the women had volunteered; more of the men had paid employment.

The key point, at this stage of the analysis, is the fact that the participants and the comparison group did not differ in terms of their experience with paid or unpaid work, prior to the start of Grade 11. This then forms the basis for comparisons two years later, once the participants have completed the NSSWT program.

Attitudes and abilities

Having established the background, prior academic performance, and previous school and work experiences of the students in the two groups, it is relevant at this stage to get a sense of their attitudes about themselves and their futures.

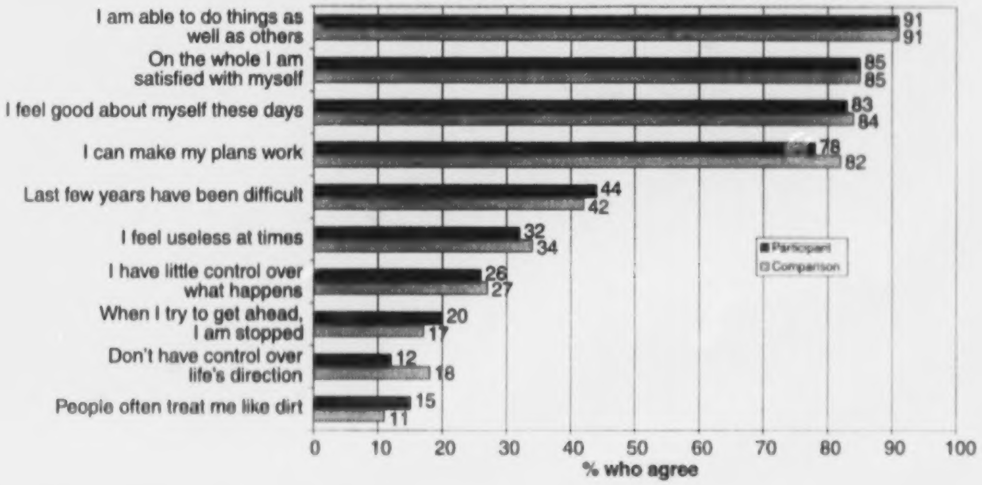
Figure 3-5 shows that most of the students, in both groups, reported having fairly positive self-images. More than three-quarters agreed with the positive statements at the top of the figure. These youth felt they were able to do things as well as others; felt good about themselves; and felt they could make their plans work. While a substantial number (44% of the participants, 42% of the comparison group) agreed that the last few years had been difficult, a third or less had negative self-images as a result.

However, it is also important to note as many as a third (32% of the participants and 34% of the comparison group) stated that they "feel useless at times"; about a quarter (26% and 27%, respectively) felt they had little control over things that happen to them. Some of the youth felt others treat them like dirt (15% of the participants and 11% of the comparison group) and/or stop them when they try to get ahead (20% of the participants and 17% of the comparison group). Clearly this subset had low self-esteem and little confidence that they could make their way in the world.

With respect to the comparability of the two groups, it is clear that their self-concepts were remarkably similar. They differed only by a couple of percentage points in most instances, and in no instance does the difference exceed 6 percent.

Figure 3-5

Youth self-concepts by participation status



N=579 (participant=289; comparison=290)

Source: Initial student questionnaire, 1995 and 1996 cohorts

It is also interesting to note the gender differences here. More of the young women said they felt useless; more of the young men said they were satisfied with themselves. Overall, young women reported lower self-esteem than young men.

One of the goals of the NSSWT program is to improve students' self-image. Chapter 4 will examine changes in these self-images at the end of Grade 12 and compare them to these baseline figures.

Post-high school plans and educational expectations

The first major decision that young people typically have to face is what to do immediately after leaving high school. Table 3-3 shows these plans at the beginning of the program.

It is clear that plans were similar for the two groups. The majority in both groups planned to be registered in an educational institution the year after high school. Many also planned to work, but typically on a part-time basis. The two groups did differ

Table 3-3

Plans three years from Grade 11 by participation status

		Full time %	Part time %	No %	Do not know %	Total %
Working						
	Participant	27	53	10	11	100
	Comparison	20	54	19	7	100
Self-employed						
	Participant	3	6	66	26	100
	Comparison	4	4	73	19	100
In an educational institution						
	Participant	64	8	12	17	100
	Comparison	67	11	12	10	100
Looking after home & children						
	Participant	4	8	66	22	100
	Comparison	6	6	72	16	100
Doing volunteer work						
	Participant	2	34	33	32	100
	Comparison	1	28	41	30	100
Something else						
	Participant	5	4	67	25	100
	Comparison	5	3	74	18	100

N=579 (participant=289; comparison=290)

Source: Initial student questionnaire, 1995 and 1996 cohorts

with respect to one post-high school plan: more of the participants expected to work full time (27% versus 20%); more of the comparison group (19% versus 10%) planned not to work at all at this stage.

Note that about a third of the students also listed volunteer work as something they would likely be doing in three years' time. For some students this may be a way of giving back to their communities. For others, it may be a way of ensuring that they have work experience, albeit unpaid experience, to list on their résumé. Few students expected to start their own business, or to be looking after a home and children.

Some interesting gender differences were evident. Young women, not surprisingly given their high academic performance, were more likely to say they would be enrolled in an educational institution in three years time (not shown). They were also more likely to see themselves doing volunteer work along with their other activities. Young men were more likely to see themselves at work or self-employed in three years' time. Interestingly, there were no gender differences with respect to looking after the home and child care. Ten percent of men and 12 percent of women listed this as an expected activity; about 5 percent of both males and females said they expected to be doing this full time.[2]

These youth seemed to have fairly clear plans, even while still in high school (although many of those with clear plans changed their minds as they moved through high school). Their responses to the initial student questionnaire, administered at the beginning of Grade 11, indicated that over half (55%) knew what specific post-secondary institution they planned to attend and two-thirds (69%) knew the program they would pursue. When asked how definite these plans were, however, they were more cautious. Slightly less than half (48%) were very definite about the type of post-secondary institution they would be attending, but only a third were willing to say the same about the type of course or program they would take. Less than 15 percent of students were very definite about the specific institution they would attend (not shown). No consistent or significant group differences were found in these respects.

When asked if they had considered "stopping out" for a year or more before going on to further education, most (62%) said no, although some had considered the idea. Only 6 percent of both groups said they planned to take time out before going on to school; another 33 percent said they do not plan to go beyond high school (not shown).

Overall, the students received a lot of encouragement to continue their education. Over three-quarters said their mothers very much encouraged them to go beyond high school; almost as many (70%) said the same of their fathers. About half received encouragement from teachers and friends, and two in five were encouraged by school counsellors.

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[2] A set of questions asked only of the 1995 cohort indicated that women and men both plan to marry and have children. Both planned to work, preferably full time, before they have children. However, when asked a hypothetical question about whether they would work with preschool-aged children at home, over 60 percent of the men, but only a third of the women, said they would work full time. Women were more likely to say they would work part time during this stage of their lives.

There were no differences between the two groups in terms of who provided strong encouragement. However, more young women reported encouragement from teachers, counsellors and friends. Young men were more likely to say these individuals had neither encouraged nor discouraged them.

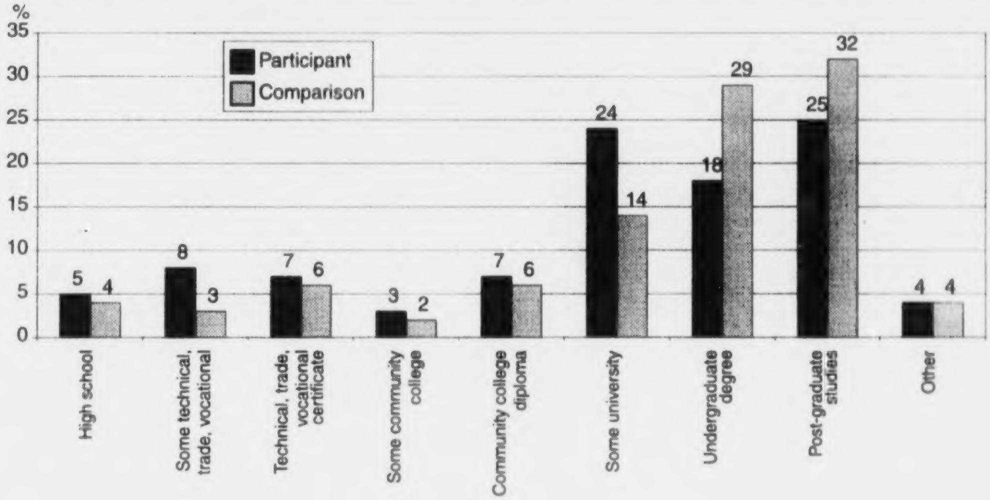
Despite this encouragement, it is interesting that, when asked who most influenced their decisions about how much education to get, 61 percent of youth said "no one, just myself." Another 28 percent listed one or both parents as the most important influence.

Not all the students planned to pursue their education directly after high school. To get a clearer picture of their plans, one can examine how much education these Grade 11 students said they eventually planned to get. Data have already been presented that show that most planned to pursue some form of post-secondary education, and this pattern is confirmed by the results in Figure 3-6.

Figure 3-6 documents an important difference between the participants and the members of the comparison group in terms of their educational expectations; more of the latter said they expected to get either an undergraduate degree or go beyond that to

Figure 3-6

Highest level of education expected by participation status



N=579 (participant=289; comparison=290)

Source: Initial student questionnaire, 1995 and 1996 cohorts

post-graduate study. More of the participants listed "some university" as the highest educational level they expected to attain. Again, this difference is likely linked to the higher academic performance of the comparison students. In general, more of the comparison students said they expected to get a degree, diploma or certificate, while more of the participants said that while they would take some further education, it would likely be short of a formal certificate.

There is also a gender difference in responses to this question. More young men aspired to technical, trade or vocational schools. More young women opted for community college or university. If women and men are preparing for different post-high school paths, this difference has implications for high school programs, such as NSSWT, that are designed to assist with that transition.

Overall, it is clear that university is the post-secondary option of choice; over two thirds of young people said they expect to get at least some university education. Less than 5 percent plan to stop their education after high school.

This last point is important as one considers their transitions out of high school. Although the NSSWT program focuses on the transition from school to work, for most of these students the critical issue was whether it would help them understand the world of work which they expected to enter on a full-time basis – not immediately after high school, but at some point in the future. Their occupational decisions were clearly linked to decisions about the type of post-secondary education to pursue, and how far to continue in the educational system. However, the NSSWT program is unique in many ways because it is not targeting at-risk youth, but rather those who expect to successfully complete Grade 12. The majority of these students planned to go beyond high school, so it is important to examine not only their readiness for the world of work, but also for the post-secondary programs they hoped would be their avenue into the full-time paid labour force.

Parents and educational plans

Parents play an important part of any school-based initiative such as the NSSWT program. They encourage or discourage their children's participation in school programs and often assist them in deciding on high school courses. In many of the areas served by the NSSWT program, parents were affected by their child's participation in this program over and above their usual level of involvement in school-based activities.

Because the program involved a work experience component, parents could be called upon to provide transportation. They would also be affected by the time demands placed on the students as part of the work experience component. In some sites, the in-school component was undertaken outside regular school times. This affected the students' free time, and again may have necessitated transportation.

Although no outcomes for parents were specified in the program design, there are at least two reasons why it is important to consider their views. First, parents can influence the involvement of students at various stages, either encouraging or discouraging their initial participation, their continuation in the program and their commitment of time to meet the program requirements. Second, parental perceptions of the program could influence its sustainability. These parents and students were drawn from fairly small, cohesive communities. If the parents of the first two cohorts were critical of the program, it is likely this perception would become known to other parents and could affect their perceptions of the program and the wisdom of their child signing up for it. Conversely, if the parents of the first two groups of students were supportive, their support is likely to encourage future participation.

The overview presented in this chapter draws on the information presented by the parents[3] of 256 participants from the two cohorts of students who started the NSSWT program. For 129 participants we have data from the parents at a second point in time, when the students were completing Grade 12.

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[3] In over 90% of the cases for both questionnaires, the participant's mother completed the questionnaire, either on her own (over 45%) or with the father. In some cases, the parent(s) involved the participating student in the completion of the parental questionnaire (16% for the first parental questionnaire; 8% for the second). Four parents answered only the final, but not the initial parent questionnaire. For the 1996 cohort, but not the 1995 one, questionnaires were given to parents of the comparison group as well. There are responses available from 131 parents of the comparison students. These parents are not included in the current analysis. But analyses (not shown) indicate there are few significant differences between the parents of the comparison and those of the participant group. Slightly more of the parents of the participating group said they "don't know" when asked about their preferences for the student's post-high school plans. Consistent with their social class background, more of the parents of the participant group would prefer their child to go to a trade, technical or vocational school, and more of the parents of those in the comparison group would prefer their child to attend university. Given that there are no differences between the responses given by parents in the two cohorts of participants (those who started the program in 1995 and those who began in 1996), the two sets of responses are combined in this analysis.

This section will examine parents' preferences for their children, in terms of education and work, to see how these preferences compare with those reported by the participating students.

It is clear from Table 3-4 that university was, by far, the post-high school destination of choice in the eyes of these parents. Almost three-quarters wanted their daughter or son to attend a university either full time (70%) or part time (4%). Few said "no" to this option. In fact, fewer said "no" to this than any other option.

Table 3-4

Parental post-high school preferences for their child (participants only)

	Yes, full-time %	Yes, part-time %	No %	Do not know %	Total
Get a job	23	45	30	2	100
Start own business	7	5	60	29	100
Trade, technical, vocational school	31	4	44	21	100
Business college	16	6	53	25	100
Community college	31	5	43	21	100
University	70	4	14	11	100

N=250 (Case base varies by question due to missing responses)

Source: Initial parent questionnaire, 1995 and 1996 cohorts

In contrast, few parents said they preferred their child to start his or her own business. This option was chosen by less than 15 percent of the parents; fully 60 percent said they would not prefer this.

While many of the parents felt getting a job was a good idea, the most frequent option chosen (by 45% of them) was that of part-time work, almost always in conjunction with some form of post-secondary schooling. While community college, business college and trade, technical and vocational school were chosen less often than university, they were seen as viable options by a minority of parents.

Parents gave their opinions about each of the outcomes listed in the questionnaire. This allowed them to indicate that more than one "full-time" activity met their approval. Most indicated university, as well as some other form of post-secondary education, as the full-time activity they would prefer for their child.[4]

Occupational plans

Given the emphasis on school-to-work transitions, a number of questions focused on the students' plans and preferences regarding work. Specifically, there is information on the characteristics important to these students when they think about their future in the labour force.

Table 3-5 is organized into three subsections, reflecting different types of work attributes that were listed as "very important." These attributes are labelled: work for material benefits, work for the challenge, and work for self-fulfilment;[5] the latter two can be seen as focusing on intrinsic characteristics of work, while "material benefits" deals with more extrinsic aspects. The responses below represent a key subset of 24 work characteristics rated by the students.

In terms of establishing the comparability of the participant and comparison groups, no consistent or large differences were found. Priorities for participants mirrored those of the comparison group.

Overall, "working for fulfilment" was the most commonly chosen set of work characteristics, with over 70 percent of the students in both groups saying these were very important to them. Many (35% to 75% of the participants and a similar number of those in the comparison group) listed other intrinsic characteristics. While good pay was listed as very important by more than half the students, fewer emphasized fringe benefits or chances for promotion.

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[4] These preferences did not change over the course of the program. When the participating students were at the end of Grade 12, their parents were sent a second survey. Although the specific percentage choosing a particular option changed somewhat, the overall patterns were the same as those presented in Table 3-4. In no case did the percentages change from those presented in Table 3-4 by more than 10%.

[5] These were the three most important factors extracted through a 24-item principal-components analysis. This multivariate data-reduction technique is used to uncover the underlying structure of a set of data.

Table 3-5

Attributes of work considered very important by participation status

Considers this attribute of work to be very important:	Participant %	Comparison %
Works for material benefit		
Pays well	56	58
Has good chances for promotion	43	49
Has good fringe benefits	33	40
Work for challenge		
Is challenging	35	38
Uses and develops your skills and abilities	75	76
Gives you responsibility	64	65
Work for fulfilment		
Fits your interests	84	87
Is enjoyable	84	85
Fits your personality	70	75
Gives you a feeling of accomplishment	74	81

N=525 (participant=266; comparison=259)

(Case base varies by item due to missing responses)

Source: Initial student questionnaire, 1995 and 1996 cohorts

There were several gender differences in the responses to this set of questions (not shown). Young women were more likely than men to say it is important that their job gives them a feeling of accomplishment and is enjoyable. It was also more important to females that their job fits their personality and their interests, gives them responsibility, and gives them a chance to develop their skills and abilities. Young men, on the other hand, were more likely to say it is important that their job pays well, and has good fringe benefits.

In other data, not shown, additional gender differences were evident. More women said it is very important that their job gives them a chance to help people, and is clean, safe and secure. More men felt it was important that their job leaves them free evenings and weekends. Overall, the women seemed to be focusing more on the intrinsic aspects of the job, while the men emphasized the extrinsic. To the extent that women and men emphasize different characteristics in the jobs they expect to enter, there are implications for any program designed to prepare them for the world of work.

Students were also asked the specific job they expected to have once they had finished all their formal schooling. They wrote in an actual job title, which was coded into the National Occupational Classification system. These codes were then reduced to five categories. The parents of participating students were also asked what job they would prefer their daughter or son to go into after finishing his or her education. Table 3-6 gives the results.

As Table 3-6 documents, most (64% of the participants and 70% of the comparison group) listed as their expected job a professional or managerial position. The remaining students were almost evenly divided between semi-professional/technical and skill level B positions,[6] with few opting for skill level C positions and none listing those at skill level D, the lowest level.

Table 3-6

Type of occupation expected by youth and the participants' parents after all formal schooling by participation status

	Participant %	Comparison %	Parent %
Managerial/professional	64	70	77
Semi-professional/technical	14	12	10
Skill level B	16	14	10
Skill level C	6	5	2
Skill level D	0	0	0

N=429 (participant=172; comparison=165; parent=92)

Source: Initial student and parent questionnaires, 1995 and 1996 cohorts

Given the gender differences in terms of characteristics that were important in jobs, it is perhaps not surprising to find gender differences in the types of jobs the youth expect. More women listed a professional occupation; more men saw themselves in skilled crafts and trades (skill level B). The question still remains whether the NSSWT program can help prepare students for these diverse occupational careers.

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[6] Skill level B positions include senior and skilled clerical, sales and service postions and skilled crafts and trades. Skill level C includes semi-skilled clerical, sales and service, and semi-skilled crafts and trades. The lowest skill level, D, is applied to unskilled clerical, sales, service and manual workers.

In line with the higher job expectations expressed by their children, and in keeping with the high educational expectations the parents hold, the vast majority of parents of participating students (77%) said they would prefer their child to go into a professional or managerial occupation. Another 10 percent listed semi-professional, technical positions as their preference. Only two percent of the parents mentioned an occupation at the second lowest skill level (level C) or lower. A comparison of the first column with the third column shows how close the student expectations and the parental preferences were. The major difference of note is the even higher percentage of parents of participants who wanted their daughter or son to go into a managerial/professional position.

Other plans

There is an additional aspect of future plans that is of particular relevance to youth in Nova Scotia, where there are several subregions with chronically high rates of youth unemployment and generally restricted job markets (see Chapter 1). The issue is one of geographic mobility or the need to "go down the road" to pursue advanced education and/or jobs with potential. Many youth and their parents recognize the need for youth to leave their local community in order to maximize their options.

As Table 3-7 shows, many students in both groups expected to have to move from their home community. If one can compare the preferences listed by the 1996 cohort with the expectations given by the 1995 cohort, it seems that these expectations were a fairly close match to what the students would prefer. However, this match holds only for the top two categories. Once the reference is to living outside the general area where the student now lives, we see a different pattern. While more than a third (35% of participants and 36% of the comparison group) in 1995 said they expected to live elsewhere in the province, less than one in five in the 1996 cohort listed this as his or her preference. The difference is even more dramatic when one asks about their moving even farther afield.

These preferences and expectations are important to a school-to-work-transition program in so far as one has to be clear what labour market the students are preparing to

Table 3-7

Expectations regarding where students will live by participation status

	Expectations 1995 cohort*		Preferences 1996 cohort*	
	Participant %	Comparison %	Participant %	Comparison %
In the same community in which they now live	15	21	12	17
In the same general area	21	23	21	16
Elsewhere in the province	35	36	17	12
Elsewhere in Canada	62	56	25	34
Outside Canada	40	37	23	17

* In 1995, students were asked how likely such an event would be; the table presents the percent who say "very likely." In 1996, they were asked how much they would prefer each outcome. The reported percentages are those who said they would "very much prefer" this.

1995 N=170 (participant=92; comparison=78); 1996 N=164 (participant=81; comparison=83)

Source: Initial student questionnaire, 1995 and 1996 cohorts

enter. If many see themselves as restricting their geographic mobility, then local market conditions become important. If most are willing to move to other regions of the country, their range of occupational opportunities would increase. However, it is not clear how a school-to-work program can be designed that will expose students to this full range of options – or how realistic it is to do so.

The parents of the participating students were also asked for their preferences about where their child will live. This issue is particularly contentious for the parents who live in rural areas of Nova Scotia. They want the best for their child, but they are reluctant to see their children leave their communities. Given the limited occupational options in many of these rural areas, what is best for their child may not be what is best for the community as a whole.

As Table 3-8 shows, many of the parents very much preferred that their son or daughter live in the same community (34%) or in the same general area (43%) where they now live. These numbers are much higher than the percentages of youth in either 1995 or 1996 who expect or prefer to stay close to home. These parents may recognize the problems facing their communities when large numbers of young people leave and, in terms of maintaining family ties, they are reluctant to have their daughter or son move too far away (see also Looker 1993).

Table 3-8

Parental preference for where the student will live

	Very much %
In the same community where you now live	34
In the same general area where you now live	43
Elsewhere in the province	11
Elsewhere in Canada	9
Outside Canada	2

N=242 (Case base varies by question due to missing responses)

Source: Initial parent questionnaire, 1995 and 1996 cohorts

The future

Having examined some of the experiences and aspects of the background of these students, the next step is to look at the ways that they see their time beyond high school. Overall, most of the students (83%) in both groups said they felt optimistic about their futures. Less than 10 percent described themselves as pessimistic (not shown). The surveys contain a number of questions that give an idea of how they saw those futures.

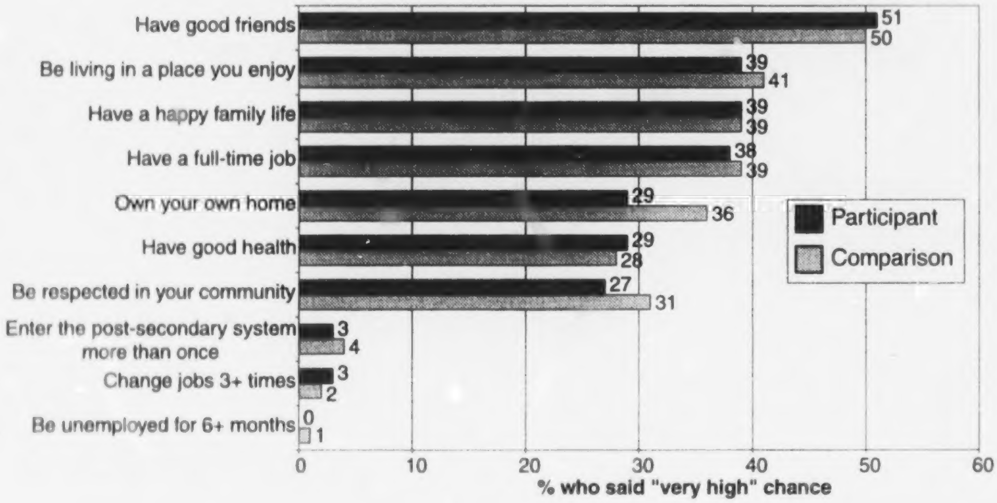
First, there is information on the different components that they envisage as part of their future. Their optimism comes through in Figure 3-7 where they describe the chances of various scenarios.

The top seven rows of Figure 3-7 list positive outcomes: having good friends, living in a place one enjoys, having a happy life and a full-time job, owning one's own home, having good health and being respected. About 30 percent or more of the youth said the chance of these positive scenarios was "very high." Indeed, in data not shown, over 70 percent said the chances of these events were high or very high.

On the other hand, the bottom three rows of the figure show less likely outcomes. Despite the emphasis by government on "lifelong learning," less than 5 percent of these students said it is very likely that they will enter the post-secondary system more than once. About the same number said it is unlikely they will change jobs more than three times or be unemployed for more than six months. In fact, other data (not shown) indicate that almost half (48%) said the chance of being unemployed for more than six months was very low.

Figure 3-7

Chances of various events in the future, all students



N=579 (participant=289; comparison=290)

Source: Initial student questionnaire, 1995 and 1996 cohorts

How realistic these views of their future are remains to be seen.[7] What is important for this report is whether these views of the future changed over the course of the next two years, and whether they changed differently for program participants than for those in the comparison group. At this stage, at the beginning of Grade 11, there were *no group differences* in these descriptions of their anticipated future.

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[7] The parents of the youth in both groups are somewhat less optimistic in their reports of what they expect the future to hold for their child. Fewer of them are confident their child will be employed full time or will be able to own his or her own home. However, the majority of parents do see the future as providing mostly positive experiences (respect, good friends, good health, a happy family life); few anticipate divorce, prolonged unemployment or multiple job changes as part of this future. Overall, the parents share the high levels of optimism reported by the students.

Choosing the program

Finally, the analysis focuses on students' comments about the program itself. Of particular interest are their reasons for choosing the program as part of their course of study, and the expectations they bring to it. This set of questions was asked only of the participants and their parents, since it is not applicable to the comparison students.

More than half of the participants reported hearing about the program from a school announcement and/or a teacher. Almost as many were told about it by the school counsellor. Less than a third received the information from either a friend or the NSSWT coordinator. Very few (less than 5%) heard about it first from their parents. About a quarter got information from two or more sources (not shown).

When asked who most influenced their decision to participate in the program, close to 60 percent said "no one, just myself." About a quarter of the students said their parents influenced them to take part. Less than 10 percent were convinced to take the program by someone associated with the school or with the program. Although the schools offered information about the program, it is not clear how much active encouragement teachers, counsellors and other school officials provided. The pattern of responses suggests that the students and their parents had an interest in and awareness of the program. Presumably, they would have high expectations of the program as well.

Table 3-9 shows the reasons the students gave when asked why they decided to participate in the NSSWT program.

Table 3-9

Reasons for participation in program, participants and participants' parents

Percentage who said each was "very important"	Participant %	Parent %
Provide work experience	88	81
Use & develop skills & abilities	76	85
Improve chances for a better job	71	51
Improved chances of getting a job	64	57
Lets me explore career options	64	89
Help decide post-secondary options	63	80
Improve chances getting into post-secondary	51	54
Would provide a job now	24	13
Provides a course option for credit	16	25

N=289

Source: Initial student and parent questionnaires, 1995 and 1996 cohorts

Most of the students considered the work experience the program promised as very important to their decision to participate. They also saw the program as giving them the opportunity to use and develop their skills and abilities, and thereby to improve their chances of getting a job, especially a good job. Close to two-thirds commented that it was very important that the program would allow them to explore their career options. Part of this exploration of career options would affect their choice of post-secondary options, a fact recognized in the youths' responses. Fewer of them thought the program, in and of itself, would help them get accepted into a post-secondary program. Few of them applied to the program simply to get a job or a course credit. They seemed interested in the content offered through the in-school and work experience components.

More of the young women said it was important that the program use and develop their skills and abilities, and more of them said it was important that it help them decide what to do after high school (not shown).

Note that, while the parents of the participating students shared many of these same hopes for the program, there are differences in what is emphasized by parent versus child. More parents saw the program as an opportunity for the student to explore career options (89% versus 64%), to have the student use and develop skills and abilities (85% versus 76%), and to help decide on post-secondary options (80% as compared to 63%). More of the students focused on improved chances for a better job in the future (71% versus 51% of their parents), and providing a job now (listed as very important for 24% of the students but only 13% of their parents). These expectations can be compared to the outcomes reported in Chapter 4 to see how well students and their parents felt they were actually met by the program.

Conclusion

What can be concluded from this overview of the students who were part of this research into the NSSWT program? First of all, it is clear that the program was successful in attracting students from a range of backgrounds, although important questions arise about why so many young women, or so few young men, participated in the program.

A key component to the design of the project was having a comparison group to compare with the program participants. This comparison allows us to be clearer about which changes in the students' attitudes and skills can reasonably be attributed to the program, and which reflect the effects of experiences they would share with other students as they move from the beginning of Grade 11 to the end of high school.

Given this planned comparison, it is reassuring to note that few large differences between the participants and the comparisons were found. The two sets of students had fairly positive self-images and they tended to rate themselves fairly highly in terms of their current levels of skill. However, in both groups substantial minorities had a fairly low self-image and/or saw themselves as having low levels of skill. This pattern indicates there is room for improvement, for at least some of the students. Chapter 4 will explore the extent to which participation in the NSSWT program helped these students.

Despite the overall similarities, some group differences are important to note. Members of the comparison group came from somewhat higher social-status backgrounds. Members of the comparison group had better prior-school experiences, performed better academically, and rated themselves more highly in terms of various work-related skills. They were more likely to expect to attend university and, more generally, to pursue a formal degree or post-secondary certificate. These initial differences between the two groups will become important in evaluating the effects of the program on student outcomes.

There were also some gender differences that come through in this stage of the analysis. These differences become important when one recognizes the different experiences that women and men tend to have in both the education system and the world of work. Given the fact that almost two thirds of the students in the project are female, one needs to be careful not to generalize to the young men findings that apply only to the more numerous young women. While both planned to pursue post-secondary education and both planned to work after they completed their education, these young women and men reported different levels and types of skills, and different self-images. Typically, the young women performed better in school, said they liked school more, and made more use of school counselling services for both personal and course counselling. While more of the young men saw themselves going to technical, trade or vocational school after they complete high school, more of the young women said they expected to attend university or community college.

Overall, these young people seemed to be facing their futures with optimism. They saw themselves as being successful and having happy personal and work lives. Few anticipated unemployment or disruptions to their work world (although many of the women planned to shift to part-time work when they have preschool-aged children).

There was also a fairly consistent pattern of the young women having lower self-esteem when surveyed at the beginning of Grade 11, despite the fact that they seemed to perform better in school. Will participation in the NSSWT program assist in raising their self-esteem? Males and females clearly had different job characteristics which are important to them. It will be interesting to see how well the NSSWT program is able to accommodate these different expectations. In general, it is important that these initial gender differences inform the evaluation of the program and its effectiveness for different subgroups of students.

The strength of this research project is that it is able to go beyond this baseline analysis and trace the attitudes and experiences of these students as they moved through their last two years of high school. There is information on how their self-images changed over this time frame and whether their optimism persisted as they moved closer to the time when they had to move into the post-high school world. Central to the analysis will be the extent to which the NSSWT program itself was successful in helping to better prepare students for that future. The next chapter on student outcomes addresses the central question of the effectiveness of the program in meeting its objective of preparing students to make the transition from school to work.

4 STUDENT OUTCOMES

Introduction

This chapter showcases the NSSWT students. It addresses the question, in what ways, and to what extent, did the program meet the student objectives? In a nutshell, these objectives for students were to increase their likelihood of completing high school; to facilitate their transition to work or further education; to augment their generic or transferable skills; to improve their educational and employment choices; to help them gain a realistic understanding about their future work; and to link their education and training with workplace realities.

Three aspects of the research design permit more valid conclusions to be drawn than is often the case in program assessments. The first is that identical information was obtained from both the participants and a comparison group. To the extent possible, assignment to the two groups was random. This rules out systematic self-selection as the source of any observed difference.[1] A second design feature is that information was collected at various points in time: at the entry point, midway through the program, at the conclusion of the program and, for the first cohort, after one year. Not only does this permit initial differences between participants and comparison students to be assessed, it permits process effects and program effects to be documented. Finally, many sources of information were used, which helps detect what are known as method-specific measurement errors. For example, use of the official school transcripts avoids memory and self-presentation bias. Likewise, having students provide self-assessments of their generic skills in addition to having them take skills tests provides for a more complete understanding of the program's effect on skill acquisition. Appendix A contains a complete list of primary data sources.

Assessment of whether the program achieved its objectives takes many forms and has many parts to it. In a very real and intended way the program had different incarnations in the form of six distinct implementations. In some respects, the experience of a Yarmouth participant, for instance, is not comparable to that of a Pictou participant. Yet in a fundamental way, the common parameters and shared objectives permit one to speak about both the common impact of the program and the specific effects of site differences. Both will be addressed in this chapter.

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[1] An earlier assessment of the co-op program, for example, could not rule out that the lower enrolment of co-op students in post-secondary educational institutions was due to the greater attractiveness of such programs to high school students who did not plan to pursue further education (Human Resources Development Canada 1994).

The program also influenced the lives of the participants in ways that may not have been anticipated or desired. For example, participation in the program required a heavy time commitment in both Grades 11 and 12. The available time, particularly in Grade 12, has many demands on it, possibly jeopardizing students' academic performance. This chapter assesses such effects in addition to documenting the achievement of the student objectives.

The answer to the question of program effects is complicated by student attrition. As will be seen shortly, participants withdrew at various times and for various reasons from the program. The magnitude, pattern and characteristics of the leavers provide important clues about how students received the program and what needs it met and failed to meet. Attrition can also be seen as a process outcome in its own right.

After examining the issues related to attrition, the remainder of the chapter considers the extent to which student outcomes differentiate between those who completed the program and those in the comparison group. Specifically, the students' educational performance, their experiences in the program and in school, their post-high school plans and paths, and their images of the future are examined. Included in this will be analyses of site and gender differences of students' experiences in high school and in the NSSWT program.

Attrition

Although participation in the NSSWT program is voluntary, a two-year commitment from participants was requested, beginning in their Grade 11 year. Not surprisingly, some participants left before this. As with all longitudinal programs, attrition has both policy and research implications. From a policy point of view, attrition may indicate program problems, with participants essentially voting with their feet. An attrition analysis assesses those possibilities. From a research perspective, attrition poses a possible loss of representativeness over time. In the NSSWT project, students were initially assigned into participant or comparison groups using random assignment procedures where possible, and matching procedures otherwise. Chapter 3 documented that these procedures, on the whole, produced the similarity required between the participant and comparison groups.[2] The research question is whether attrition compromised the overall comparability. Since the leavers may also introduce a source of comparison bias, it is important to document the nature of attrition first.

Objectives of the attrition analysis

A primary objective of the attrition analysis is to explore whether academic factors and concerns were reasons for leaving the program. A variety of sources suggested that concern about the possible negative effects of participation on academic performance was common. Already in the first year, both students and parents in Truro questioned the amount of class time missed because of work placements. Here is how one of these parents put it:

> I think the cost is too great – one day a week out of school for two years, especially in Grade 12. If students have any inclination to go on to post-secondary education, they cannot miss this much time.

Was such a concern justified? This analysis attempts to answer that question.

A further objective is to assess whether the expected post-high school path was a consideration in the decision to leave the program. The NSSWT program was intended for students who planned to enter the work force immediately after graduation from high school; for those who expected to attend university; for those who had other post-high school plans, such as attending a community college; and for those who had no idea what they would be doing after high school. The quote above suggests that participants with further education in mind might ultimately find the workload too heavy. Does the pattern of attrition indicate that the program failed to meet the expectations of participants with certain post-high school plans?

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[2] The important exceptions were that the participants were somewhat more likely than the comparison students to come from families where the father had less than a university education. Additionally, they tended to have somewhat poorer academic results, and, probably for both of these reasons, were somewhat less likely to expect to pursue a university education immediately after graduating from high school. Finally, they were somewhat more modest in that they consistently assessed their own generic skills as lower. Perhaps as a consequence of all these factors, they did not expect ultimately to obtain as much formal education as did their comparison counterparts. The research question is whether attrition compromised the overall comparability.

A third objective is to document participant accounts about why they left. In follow-up interviews with the 1995 cohort, an attempt was made to contact all those who left the program as well as those who had graduated. Those who left were asked why they did not complete the program. What reasons did they give for discontinuing their involvement in the program?

Finally, to make a valid assessment of the program's effects, it is necessary to determine whether attrition compromised the comparability of participant and comparison groups. These objectives overlap one another. For example, if post-high school plans are related to attrition, it also means that participants who completed the program are no longer representative of the ones who started, nor can valid comparisons be made with the comparison group without statistical adjustments.

Measuring attrition

At the end of the first year of the program, the project coordinators revealed that not all participants would complete the program. Apparently, factors such as the extra work required for participation in this program made some students reconsider their participation. As a result, a brief exit questionnaire was developed which asked respondents, among other things, to indicate the date they left the program. It would have been ideal to calculate the number of days or weeks in the program from this, but the exit information was often not that precise. Participants might skip a workshop or two, for example, return for one more class and then never resume participation. The exit information is sufficiently precise, however, to establish the following sub-groups:

- withdrew in the first term of the first year;
- withdrew during the first year;
- withdrew prior to starting the second year;
- withdrew during the second year; and
- completed the program.

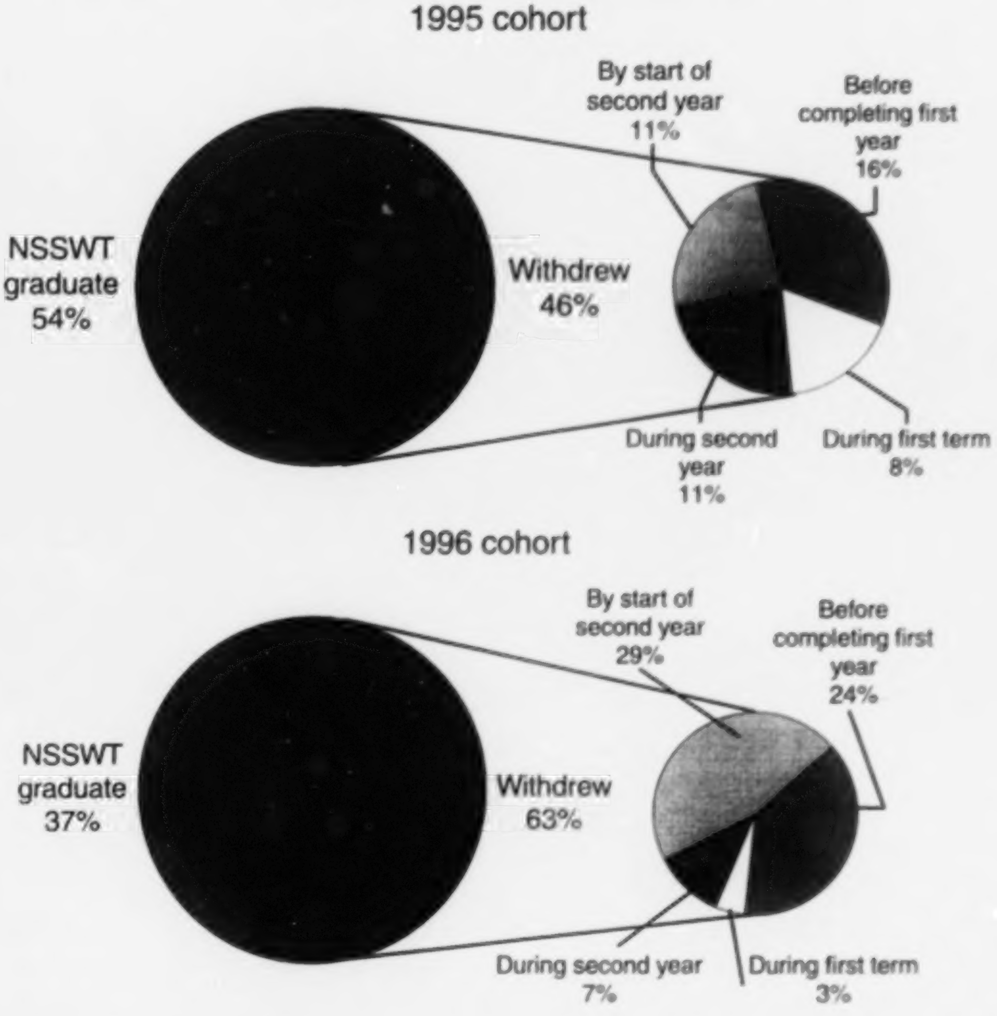
For this part of the analysis, participants who completed both years of the program will be referred to as NSSWT graduates. All those who withdrew from the program at any point in time are collectively called NSSWT leavers.

Extent and pattern of participation

The overall completion rate in the NSSWT program was unacceptably low. As shown *in Figure 4-1, just over half the participants in the 1995 cohort (54%), and even fewer* in the 1996 cohort (37%) completed both years.

Figure 4-1

Participation status by cohort



1995 cohort N=136; 1996 cohort N=153

Source: Exit questionnaire, 1995 and 1996 cohorts

The low completion rate in the second cohort resulted from high attrition in the period between the two school years, during which time almost 3 in every 10 participants (29%) withdrew. A contributing factor, according to some project coordinators, was the uncertainty introduced in some schools by moving to a semester system. In such a system, fewer courses are taken per term, but these are completed within the term rather than throughout the school year. So, each class accounts for more time during that semester. Different courses are taken in the second term. If the NSSWT program required a student to miss other classes because of commitments to either the in-school or the work experience component, the time loss for any particular course would be more serious under a semester system than if the classes had been spread out over the year. Although in principle a semester system should increase flexibility, its introduction midway through the program apparently created student anxieties, prompting some to leave.

In the first year, the NSSWT program was an unknown entity. It is likely that some students enrolled whose expectations differed from what the program offered. Such students would likely leave the program very quickly. This might be the reason the withdrawals during the first term were higher for the first cohort than for the second (8% versus 3%, respectively). By the second year, the nature of the NSSWT program would be better known, decreasing the likelihood of mismatched expectations and early withdrawals.

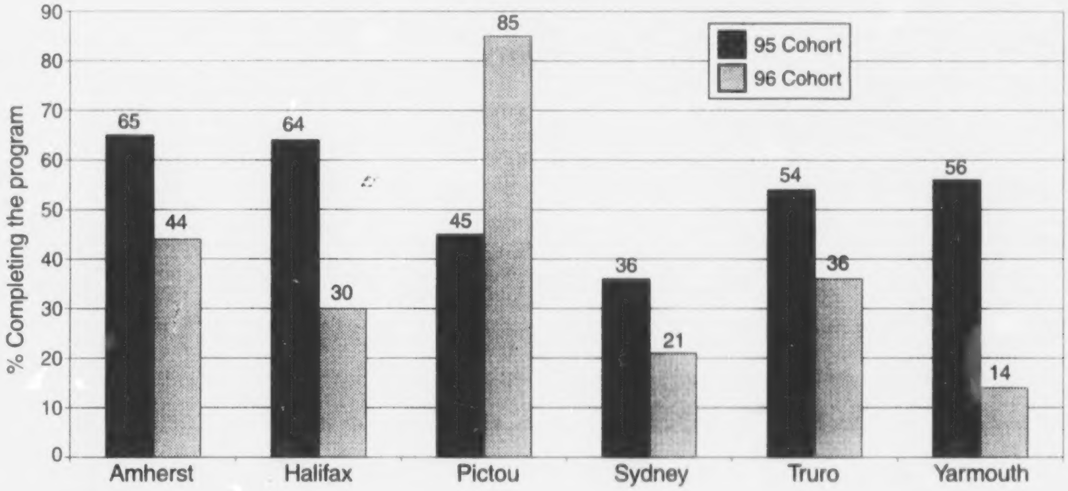
For both cohorts, the completion rate was highly variable by site (see Figure 4-2). Overall, sites with an honorarium for all participants (Amherst and Pictou) tended to have the highest completion rates. Yarmouth, despite having the most demanding in-school and work experience components, had an average attrition rate among the 1995 participants, but this plummeted by 42 percentage points with the 1996 cohort.

Not only does attrition vary substantially by site, but little constancy in completion rates marks the two cohorts. In all sites save Pictou, the completion rate fell substantially between the two cohorts. In contrast, Pictou's completion rate was 40 percentage points higher for the 1996 cohort.

The fact that the attrition problem intensified in five of the six sites is worrisome. As previously mentioned, some project coordinators felt this was due to the introduction of a semester system. The problem with this explanation is that attrition also increased in sites where no semester system was introduced. Could it be that, with increasing awareness of the heavy time demands, project coordinators were less adamant about

Figure 4-2

Completion rate by cohort and site



1995 cohort N=136; 1996 cohort N=153

Source: Exit questionnaire, 1995 and 1996 cohorts

the two-year time commitment? According to this explanation, attrition should be especially severe in the time interval between the first and second academic years. Although almost 3 in 10 (29%) participants left during that interval, almost as many (27%) left sometime during the first year, so this explanation is not sufficient. Is it possible that the participants in the second cohort were in some important ways different from those in the first cohort? The project coordinator from Amherst, for example, remarked the first cohort was more competitive than the second one. However, no large initial differences between the two cohorts have been unearthed. It may well be that uncertainty about the future of the NSSWT program contributed to a sense of dénouement among the project coordinators and the participants. However, the available data cannot address this possibility.

Given the strong tendency for attrition to be more severe for the 1996 cohort, it is especially important to ask why Pictou is such a contrasting case. In this site, the completion rate improved dramatically between cohorts. Previous analysis indicated that in addition to an exemplary in-school component, Pictou had instituted particularly solid work placement procedures and consequently found particularly appropriate work placements. Also, in Pictou the second work experience often occurred in the summer prior to Grade 12. This would have dramatically alleviated the time pressures in the second year of the program.

Attrition and academic demands

The NSSWT program was a time-intensive program, requiring participants to take both in-class instruction and obtain work experience. The exit questionnaires, as well as reports from project coordinators, revealed student and parental concern with academic performance. This makes it important to track the academic performance of those who withdrew at various points over the two-year period, as well as those who completed the program, since such performance may be a factor in the decision to leave the program.

Table 4-1 details the total number of classes taken by those who completed the program, those who withdrew from the program, as well as for the comparison group in each of their final four years of secondary education. Differences in the number of classes taken prior to participation in the NSSWT program are small and insignificant. This is particularly evident in Grade 10 where the average number of classes taken varies only between 6.3 and 6.6. Nevertheless, there is a consistent tendency (not statistically significant in any one given year, but noteworthy because of its consistency)

Table 4-1

Average number of classes taken in Grades 10 to 12 by participation status

Participation Status	Grade 10 Mean	Grade 11 Mean	Grade 12 Mean
NSSWT graduate	6.5	7.1	6.9
NSSWT leaver	6.4	6.6	6.2
Withdrew during the second year	6.4	7.4	6.4
Withdrew by the start of the second year	6.3	6.9	6.6
Withdrew before completing the first year	6.5	6.3	6.0
Withdrew during the first term	6.6	5.9	5.8
Comparison	6.4	6.5	6.6

N=575 (NSSWT graduate=122; leaver=163; comparison=290)

Source: High school transcripts, 1995 and 1996 cohorts

for participants who completed the program to have taken a somewhat higher number of classes than the comparison group in each of the four years. These findings may indicate that the NSSWT graduates had the maturity to cope with the heavier workload that participation in the NSSWT program required.

Several patterns suggest that workload was indeed a factor in the decision to withdraw from the program. One indication is that in their final year, those who completed the program carried the highest class load (6.9 classes), whereas those who withdrew at any point in time had lower class loads (ranging from 5.8 to 6.6 classes). Another is that those who withdrew during their second year had the highest class load in Grade 11 (7.4 classes). Perhaps they were the most ambitious students who had taken on too much. At the same time, note that those who withdrew during the first term tended to have the lowest class load. This suggests that the program attracted a few students who were not serious about their school work. When the demands of the program became apparent to them, they left.

Senior high school classes are offered at different levels of academic content. Of fundamental importance is whether the class would count toward university admission. The number and nature of such classes taken acts implicitly but effectively as a streaming mechanism into types of post-secondary institutions. Specifically, students with an insufficient number or type of university preparatory (including honour's level) classes would not have the option of pursuing a university degree. This means that the level at which classes are taken is as important as the marks received in determining available future paths. For this reason, it is important to look specifically at those courses relevant for university admission.

Concentrating on classes taken at a university-preparatory level, Table 4-2 clearly shows that time of withdrawal is crucial to understanding attrition. Early leavers (participants who withdrew during the first year) consistently took fewer university-preparatory classes than either NSSWT graduates or the comparison group; in contrast, late leavers (participants who completed the first, but not the second, year of the program) took more such classes than all other groups. Note especially that the early leavers can be distinguished clearly from all other groups on the basis of the number of university-preparatory classes they took prior to participating in the NSSWT program. They took only about half as many of these classes in Grade 10 as the late leavers, the NSSWT graduates and the comparison group.

Table 4-2

Average number of university preparatory classes taken in Grade 10 to 12 by participation status

	Mean number of university-preparatory classes in:		
Participation Status	Grade 10	Grade 11	Grade 12
NSSWT graduate	2.1	3.8	4.2
Late leaver	2.4	4.2	4.4
Early leaver	1.2	3.4	3.2
Comparison	2.3	4.0	4.2

Note: Early leavers withdrew during the first year; late leavers completed the first, but not the second, year of the program.

N=575 (NSSWT graduate=122; late leaver=84; early leaver=79; comparison=290)

Source: High school transcripts, 1995 and 1996 cohorts

This class-load analysis supports several conclusions. First, it is possible to identify early leavers on the basis of their class load prior to their involvement in the program. Although they took about the same number of classes in Junior High School as all other groups, they took decidedly fewer university-preparatory classes in Grade 10. This is a possible indication that the early leavers were already experiencing academic difficulties.

Second, even after withdrawing from the program, early leavers continued to take fewer university-preparatory classes than did any other group. This reinforces the conclusion that the early leavers were academically weaker performers.

Third, late leavers are academically the most ambitious students. They took on average more university-preparatory classes than either the NSSWT graduates or the comparison group – a workload that was perhaps too heavy to permit completion of the program.

Finally, NSSWT graduates are hardly distinguishable from the comparison group, either in terms of the total number of classes taken or the number of university-preparatory classes taken. The direct implication of this is that, despite the heavy time commitments the NSSWT program required, participants did not reduce other aspects of their academic workload.

The importance of time of withdrawal is reinforced in the analysis of the marks obtained (see Table 4-3). Again, the earliest leavers appear to be the weakest students academically. They ended junior high school with the lowest average mark (67), the lowest English mark (69) and the lowest mathematics mark (72). By the end of high

Table 4-3

Average GPA, English and mathematics marks in Grades 9 to 12 by participation status

	Grade 9 Mean	Grade 10 Mean	Grade 11 Mean	Grade 12 Mean
GPA				
NSSWT graduate	77	73	72	71
Withdrew during the second year	82	77	73	72
Withdrew by the start of the second year	77	73	69	72
Withdrew before completing the first year	76	69	66	68
Withdrew during the first term	67	66	65	67
Comparison	79	75	73	74
English marks				
NSSWT graduate	76	73	72	72
Withdrew during the second year	79	78	74	73
Withdrew by the start of the second year	75	72	73	71
Withdrew before completing the first year	74	70	66	69
Withdrew during the first term	69	70	64	68
Comparison	78	76	74	75
Mathematics marks				
NSSWT graduate	74	70	67	66
Withdrew during the second year	82	76	69	71
Withdrew by the start of the second year	73	70	64	68
Withdrew before completing the first year	73	68	64	67
Withdrew during the first term	72	64	61	57
Comparison	77	73	68	69

Note: GPA in Grade 11 and Grade 12 exclude the mark for SWT.

N=575 (NSSWT graduate=122; NSSWT leaver=163; comparison=290)

Source: High school transcripts, 1995 and 1996 cohorts

school, despite having withdrawn from the NSSWT program in the first term, they remained the lowest performers, with scores of 67, 68 and 57 for their Grade 12 average, English and mathematics marks, respectively.

A rather different dynamic underlies the latest leavers. They achieved the highest marks in Grade 9. Their average mark and their mathematics mark were both 82, while they received a 79 in English. However, by Grade 11 they had also suffered the greatest drop in performance: their average mark deteriorated by nine points, English by five points, and mathematics by 13 points. Despite these large declines, their academic performance by all three measures was still slightly better than that of the NSSWT graduate. Keep in mind that these participants were also taking the highest number of university-preparatory courses in Grade 11 (4.2) and continued to take the highest number in Grade 12 (4.4).

Taken together, these findings support the interpretation that late leavers were concentrated among the academically strongest performers whose marks had declined substantially by the time they completed Grade 11. Concern with their marks is likely the reason they withdrew. This is not to imply that it was necessarily participation in the program that actually caused their performance to drop. Note that after withdrawing, even though their mathematics mark improved by two points, their English and grade-point average (GPA) marks continued to drop, although by only one point. Among those who completed the program, the change in marks between Grade 11 and Grade 12 was not appreciably different.

Participants' accounts of attrition

In May 1998, one year after normal completion of high school, a telephone follow-up survey was conducted with the 1995 cohort. Sixty-four percent (36 out of 55 leavers) of the participants who did not complete the NSSWT program consented to a telephone interview.[3] The interviews started by asking them if they would be willing to answer a few questions about why they left. They were then provided a series of possible reasons for not completing the NSSWT program and asked which applied to them. The results are shown in Table 4-4.

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[3] In two additional cases, a parent provided dropout information. Only one leaver actually refused to be interviewed. The remaining non-respondents could not be reached due to wrong telephone numbers (10), no answer (3) or no telephone listing (3).

The information in this table corroborates somewhat the project coordinators' understanding and the information obtained from personal interviews with participants. The main conclusion is that time constraints constitute the biggest single reason for withdrawing from the program, with nearly half (48%) the leavers mentioning this factor, and another 12 percent indicating they could not fit this course into their school schedule.

Spotty attendance in the work placement or the in-school component, as well as failing grades, were grounds for dismissal from the program. Fifteen percent of the leavers indicated they were not allowed to continue in the program.

Only 18 percent of the leavers mentioned a work placement reason (15% stated they dropped out because they did not like their placement and another 3% because they did not obtain a placement). Interestingly, neither mismatched expectations nor dissatisfaction with the content of the program played much of a role in the decision to withdraw.

Table 4-4

Reasons given for leaving the NSSWT program

	%
Took too much time	48
Was not allowed to continue	15
Did not like work placement	15
Couldn't fit into school schedule	12
Did not like the project coordinator	12
Boring, not interested	9
Not what I expected	6
Concerned about marks in other classes	3
Doesn't count for university credit	3
Did not get work placement	3
Concerned about marks in SWT classes	0
Did not like in-school component	0

Note: The sum of the percentages exceeds 100 percent since leavers could indicate multiple reasons.

N=36 leavers

Source: 1995 cohort follow-up interview

In terms of the accounts given by the leavers themselves, there is little reason to believe that dissatisfaction with the program was a major factor. Indeed, the comments indicate they liked the program. As one leaver remarked, "It's a good program; I'd recommend it to anyone, it's just not for me." Another one felt, "it turned out being good for me personally; it helped me discover something that I would never have thought about pursuing before. My sister just joined the program; she's excited about it." About the most negative comment made was the following: "It didn't really help me a lot. The in-class part was pretty good but overall it didn't really help."

What is surprising is that few leavers mentioned concern about marks. The impression from interviews with project coordinators, focus groups with parents, as well as the analysis of changes in academic performance, indicated that concern over academic performance was a bigger factor. It may be that concern over time is conflated with concern with academic performance. For example, participants who had to miss class time often found teachers less supportive. One NSSWT graduate, when asked why others had quit, remarked:

> Most of them found that they were missing too much class time and they weren't getting enough support and help from the teachers to make up the work they missed. So I mean, they didn't just have the pressure of getting their work done, but they also had the stress and pressure from the teachers not supporting it and not being helpful.

In personal interviews, some participants in the 1996 cohort felt that the NSSWT program had already earned the reputation of being an "easy credit" and then quit when they found out that they had to give up their evenings and/or Saturdays.

As might be expected, attrition was also related to specific features of the implementation at a given site. In Sydney, for example, students are bussed to the school, making lunch times one of the few times students can socialize. One participant in Sydney believed her friends withdrew from the NSSWT program precisely because, "it takes up lunch times and they wanted to hang around with their friends or boyfriends ... Lunchtime is the only time you get to see people in the school."

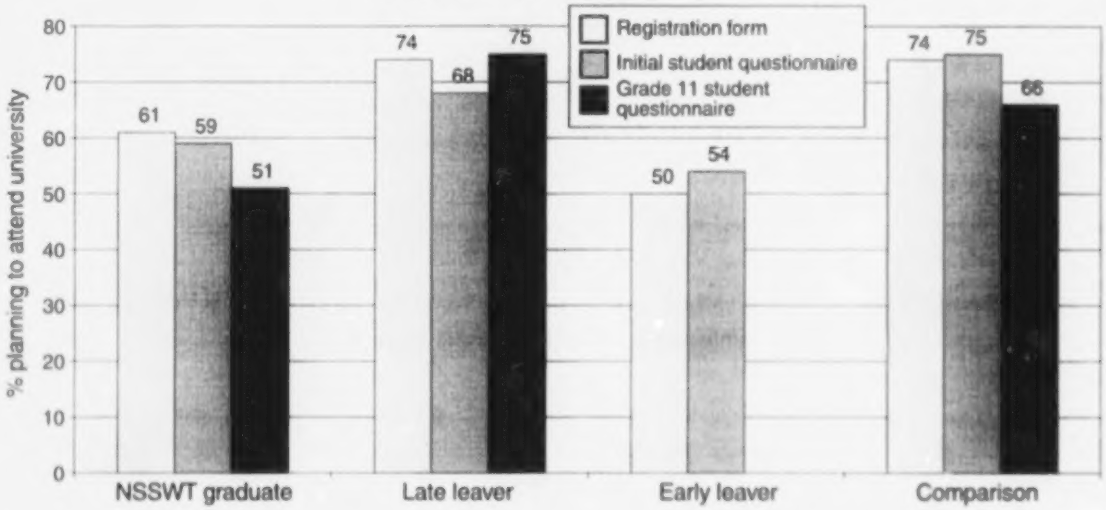
Attrition and post-high school plans

Another way to approach the underlying motivation to withdraw from the program is to look at post-high school plans. It would not be surprising if students with certain plans and aspirations felt the program did not further their aims as well as expected, and therefore left the program. What paths did participants who dropped out expect to take, compared to those who remained in the program? Marks would be crucial to those who planned to attend university, for example. If participation in the program jeopardized the achievement of high marks, then attrition should be especially likely to occur among those who planned to attend university.

Figure 4-3 shows that, as with the marks, attrition is complexly related to post-high school plans. University attendance is the favoured path of the late leavers but less-favoured path of the early leavers. As many as three out of every four late leavers planned to attend university prior to their participation in the NSSWT program, as well as during it. In contrast, only between half (51%) and three fifths (61%) of the NSSWT graduates had such plans. However, the early leavers were even less likely than the NSSWT graduates to expect to attend university after completing high school. Among the former, 50 percent planned to attend university before entering the program.

Figure 4-3

Plans to attend university at different points in time by participation status



Note: Information on post-high school plans is not available from the Grade 11 student questionnaire for the early leavers.

N=575 (NSSWT graduate=122; late leaver=84; early leaver=79, comparison=290)

Source: NSSWT registration forms, initial and Grade 11 student questionnaires, 1995 and 1996 cohorts

Pre-participation differences

Are there any attributes of leavers that manifest themselves prior to their participation in the NSSWT program? This question has potential policy and research implications. At the policy level, leavers may indicate the target population of a program needs to be refined. Or, vice versa, if strong grounds exist for particular eligibility criteria, the leavers may indicate ways in which a program needs to be modified to serve all segments well. In any event, leavers usually represent a financial cost that needs to be minimized.

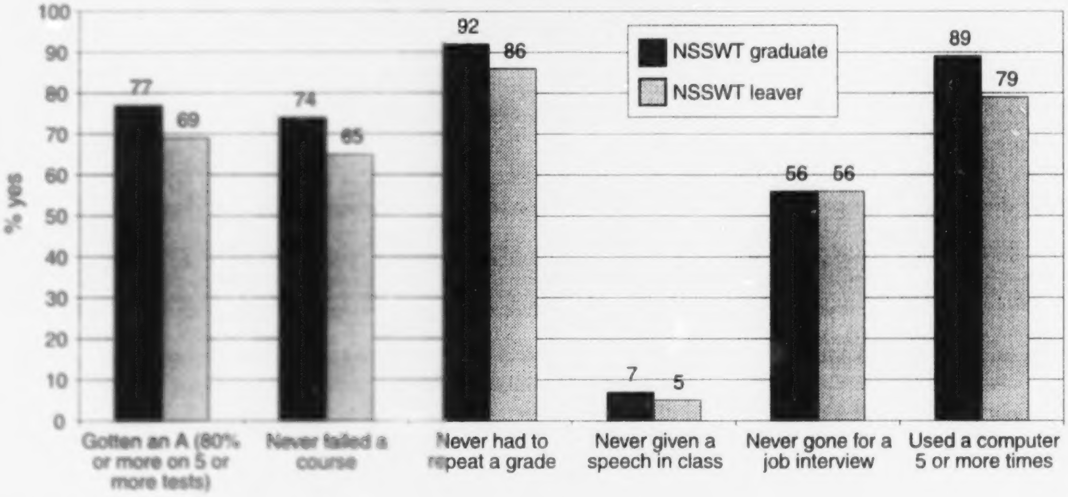
From a research perspective, the detection of initial differences between leavers and graduates compromises comparability between the participant and comparison groups. Hence, in those areas where leavers differ from graduates, adjustments need to be made when assessing program effects.[4]

The previous section established that the academic performance of leavers, even in Grades 9 and 10, gave some indication that the NSSWT program may not have served the two extremes of academic performers particularly well. The middle performers seemed most likely to complete the program. What other initial differences distinguish leavers from graduates?

Supporting the conclusion from the analysis of their course load and marks obtained, the NSSWT graduates showed only slightly better prior academic work. They were somewhat more likely than leavers to report obtaining an A and somewhat less likely to report having failed a course in the preceding three years (see Figure 4-4). They also used computers somewhat more frequently.

Figure 4-4

Academic performance indicators in the past three years by program-completion status



N=285 (NSSWT graduate=122; NSSWT leaver=163)

Source: Initial student questionnaire, 1995 and 1996 cohorts

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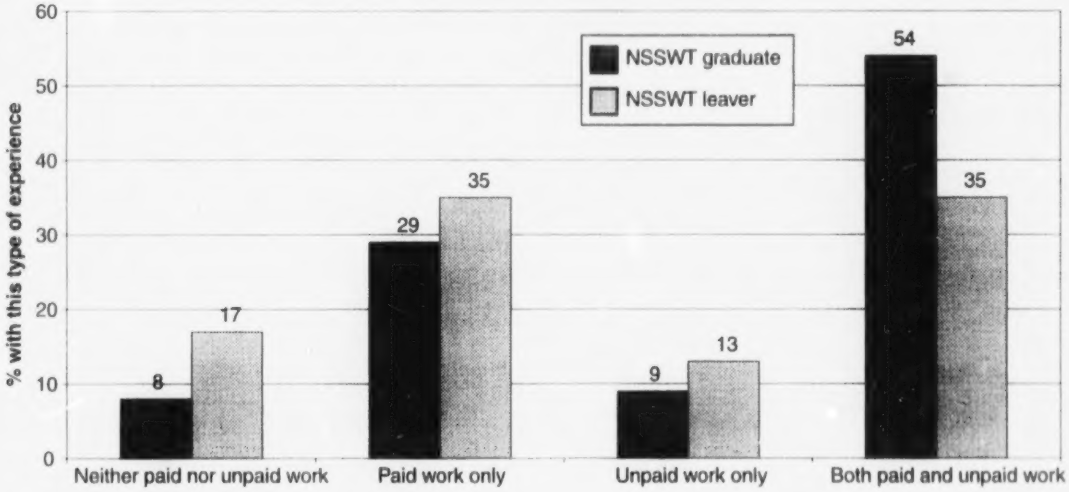
[4] In this section, leavers are not differentiated between early and late, since a main purpose is to assess the extent to which attrition introduced non-comparability between NSSWT leavers and graduates.

Prior work experience is an important difference between the graduates and the leavers. As Figure 4-5 shows, NSSWT leavers were somewhat less likely to have had any kind of work experience, while graduates were significantly more likely to have both paid and unpaid work experience prior to taking the NSSWT program. It is not clear how this factor is implicated in the attrition process. Perhaps the prior work experience instilled in the graduates a greater sense of responsibility and of the importance of preparing for the transition to work.

Figure 4-5

Work experience (paid and unpaid) before entering the program by program-completion status



N=285 (NSSWT graduate=122; NSSWT leaver=163)

Source: Initial student questionnaire, 1995 and 1996 cohorts

Two additional findings suggest that the NSSWT graduate is more likely than the leaver to consider preparation for work to be important. First, it was substantially more important for the NSSWT graduates that their job be directly related to their education and training (55% versus 36%, respectively, responded that this is very important to them). This reinforces the interpretation that the graduates may have had prior experiences that led them to see the value and importance of work-preparation programs such as the NSSWT program. They believed it to be important to have appropriate education and training to prepare them for the type of work they ultimately expect to have.

A final finding that reinforces the conclusion that NSSWT graduates had a greater sense of the importance of preparing for the world of work is found in their views on youth unemployment. Although there were no statistically significant differences in any of their views, the graduates were consistently more likely to feel that jobs were getting more scarce (either because of technology or the nature of the global economy) and that young people were not making sufficient efforts to obtain available jobs. For example, more (15 percentage points) of the graduates than the leavers felt that jobs were moving out of Canada and more (11 percentage points) felt that young people were too choosy about the jobs they will take (not shown).

Although some additional differences between the graduates and the leavers were detected, none of them was large, nor were they necessarily the ones that one would most expect. Instead, the similarities between NSSWT graduates and leavers are more striking than their differences. For example, the graduates and leavers come from similar social backgrounds. Their parents had about the same education, although there is some indication that the parents of the graduates held somewhat less skilled jobs: 36 percent of fathers of graduates held jobs classified as semi-skilled manual or lower, compared to 22 percent of fathers of leavers. The comparable figures for mother's occupation were 23 percent and 13 percent. Thus, if anything, the NSSWT graduates came from families with less access to financial and other resources.

The same story unfolds with respect to social supports for higher education. No significant differences between graduates and leavers were discerned in this area, although leavers reported slightly greater encouragement for continuing their education from all sources except friends.

Perhaps leavers had different reasons than graduates for taking the NSSWT program. If they had different expectations, the program might have suited them less well. Such an explanation is not at all confirmed, however, since no consistent or significant differences in self-reported reasons for taking the program were found.

Another possible area in which differences might be expected is in post-high school plans, and ultimate occupational and educational expectations. But leavers did not demonstrably differ from graduates in any of these areas. On average, they had similar occupational and educational expectations, and both their immediate and three-year post-high school plans showed no systematic differences. There is a slight indication that trade, technical, vocational school and community college were more likely to be part of the plan for graduates and that the leavers were expecting careers in the professions. Overall, however, their plans were similar and they were equally definite about those plans.

A low sense of personal competence and self-esteem could lower one's ongoing commitment to a program. A number of questions related to such a possibility were contained in the initial questionnaire. No significant differences in feelings about oneself were found, however. If anything, leavers were slightly more likely to feel satisfied with themselves, with how they are treated by others, and with their ability to make things happen. However, none of these differences exceed 10 percent. NSSWT graduates were slightly more optimistic about their economic and personal future. They were more likely to believe they will have a full-time job and a happy family life, for example. Again, none of the differences was larger than 10 percent.

Post-participation differences (1995 cohort only)

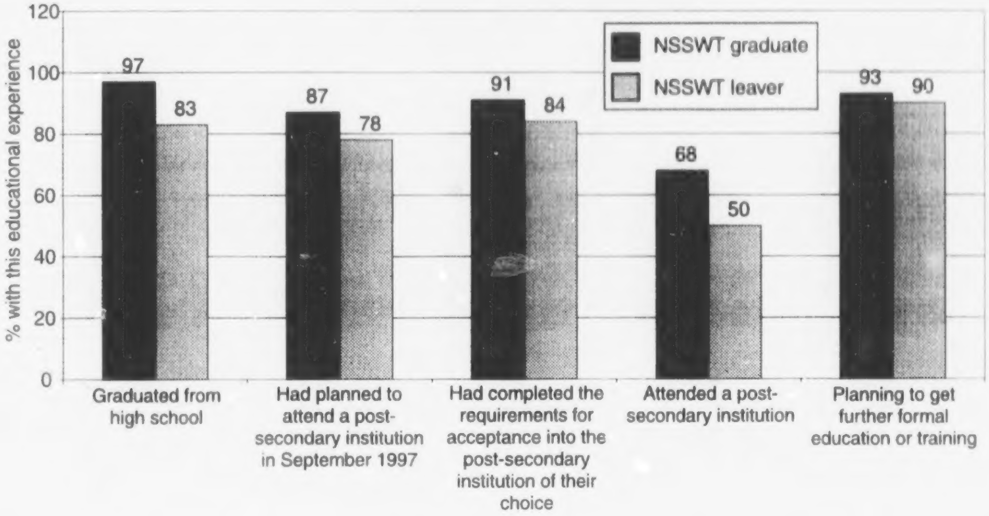
Follow-up interviews with the 1995 cohort provide an additional opportunity for assessing the nature of attrition. The design of the follow-up study permits a comparison between the NSSWT graduate and the NSSWT leaver.

Not unexpectedly, leavers were significantly less likely to have graduated from high school. At the time of the follow-up interviews, 97 percent of the NSSWT graduates, but only 83 percent of leavers, had graduated from high school. Also, only half the leavers attended some post-secondary institution, compared to two thirds of NSSWT graduates. Nevertheless, at least 9 in 10 of both groups planned to continue their education in the future. This suggests that the educational experiences of the leavers, despite being less positive, did not dampen their commitment to obtaining further schooling. Indeed, their intention to pursue post-secondary education was actually strengthened. At the beginning of the program, only two thirds (66%) of the leavers intended to pursue post-secondary education, compared to 90 percent after one year of the program (see Figure 4-6).

The commitment to further education among the leavers might also have been stimulated by their somewhat greater difficulty obtaining paid employment. About three in every four (76%) leavers obtained a paid job in the 10 months after the completion of the program. This compares unfavourably with the nearly 9 in 10 (89%) NSSWT graduates who found paid employment. Indeed, NSSWT graduates were more than twice as likely to find two or more paid jobs (58% versus 25%). The two groups do not differ with respect to other labour market activities, such as unemployment, self-employment, or receiving Employment Insurance income.

Figure 4-6

Educational experiences of NSSWT graduates and leavers at the time of the one-year follow-up



N=133

Source: 1995 cohort follow-up interview

Finally, there is no evidence that the leavers were less likely than others to carry out their plans. In the follow-up questionnaire, the 1995 cohort was asked whether they had planned to attend a post-secondary institution in September of 1997, and whether they had actually attended a post-secondary institution. A simple measure of the likelihood of implementing their plans is to calculate the percentage whose answers to the two questions were identical. The results showed that to be the case for 74 percent of the NSSWT graduates and 75 percent of the NSSWT leavers.

Summary of attrition analysis

This section documented that the high attrition rate from the NSSWT program did not represent dissatisfaction with the program. Although it is comforting to know that dissatisfaction was not the root cause of withdrawing from the program, the low completion rate remains a problem.

The attrition analysis also revealed that the leavers were not a homogeneous group. Early leavers appeared to be academically weak, while late leavers were particularly ambitious. By leaving, it suggests the program was not able to meet their needs as well as it might have. To the extent that is so, the appropriate conclusion is that the NSSWT program should target the academically typical or average high school students. The co-op program seems to be targeted to the above-average student. That leaves the question of how to address the needs of the struggling student. Perhaps project coordinators need to have such students identified and give them extra attention.

The fact of attrition intrinsically creates uncertainty in assessment conclusions; more than a modicum of care and caution must therefore be exercised when interpreting the results. Some readers may be tempted to dismiss any program effects because of the high attrition. This would be unfortunate, since two features of the attrition documented in this chapter argue in favour of relatively benign attrition effects. First, although leavers as a group tended to have somewhat lower academic performance, few large or statistically significant differences between them and the NSSWT graduates were unearthed. The same procedures and identical criteria originally administered to determine whether prior differences characterized participant and comparison groups were subsequently employed to test for loss of representativeness due to attrition. Only two statistically significant differences were found: NSSWT leavers were less likely than graduates to have had prior paid or unpaid work experience; in the 1995 cohort, they were also less likely to have graduated from high school.

Second, it was precisely those leavers who had participated the least whose outcomes were generally the least favourable. That is, the early leavers, who had little exposure to program intervention, fared the worst on a number of indicators. In contrast, the late leavers, who consequently also had more exposure to both the in-school component and supervised work experience, performed particularly well. It would be illogical in such circumstances to attribute the poor performance of the early leavers to the fact of their participation, while discounting the solid outcomes of the late leavers because they failed to complete the program. The opposite conclusions would be more appropriate. Taking an extreme case, a student who left the program prior to its first meeting does not really belong to the participant group since no treatment was received. With an experimental or quasi-experimental design, it might be better to consider such a student to belong to the comparison group.

The above analysis focused on the differences between those who completed the program and those who withdrew. To assess the effects of the program, it is necessary to compare those who completed it with those in the comparison group. The remainder of this chapter makes this comparison.

Academic performance

This section examines the academic performance of participants who completed the NSSWT program. This examination rests primarily on school transcripts, which indicate the courses taken, the level at which the courses are taken (such as university preparatory or honours) and the marks received.

Analysis objectives

Information from the high school transcripts of the 1995 and 1996 cohorts is used to explore answers to the following questions:

- Has the NSSWT program succeeded in enabling participants to obtain a high school completion certificate? This was one of the education-related objectives of the program.
- Did participation in the NSSWT program jeopardize academic performance? The heavy time commitment associated with the program engendered concerns among some participants and parents that the participants' marks might suffer. Were these fears realized?
- In what ways did the NSSWT program affect decisions about how many classes, which classes, and at what level to take these classes in high school? Both the choice of classes and the level have implications for university admission – the desired post-high school path of most students, as well as their parents. Do the choices made permit university attendance as an option?
- Did the NSSWT program have similar academic effects on all participants? In contrast to many work experience programs, the NSSWT program was intended to attract a wide array of students. A possible danger in such a strategy is that some might not be served particularly well. Focusing just on the implications for academic performance, was that the situation here?

Qualification for high school completion certificate

One of the desired outcomes of the NSSWT program was to enable the participants to obtain a high school completion certificate that would qualify them for entrance into post-secondary institutions. A concern was that the heavy time demands for participants in the project might impede their progress through high school. This section first describes the requirements for obtaining a Nova Scotia high school completion certificate, followed by an assessment of the extent to which this outcome was achieved.

Although the requirements for a high school completion certificate change from time to time, they remained the same for the 1995 and 1996 cohorts. These were to complete:

- a minimum of 17 course credits for Grades 10, 11 or 12 (a maximum of seven Grade 10 courses count toward the 17 required credits). To obtain a credit for a course, a mark of 50 or higher is required;
- at least five Grade 12 courses;
- three English credits, one at each high school grade level;
- one mathematics credit;
- two social studies credits, one of which is in the area of global studies; and
- one science credit chosen from biology, physical science, chemistry or physics.

Some of these requirements were fulfilled by virtually all students. For example, the science requirement was fulfilled by all students and the mathematics requirement by all except 1 percent of the comparison group. On most of the criteria, the NSSWT graduates were slightly more likely than the comparison students to complete the requirements. More importantly, 8 percent more of them completed all graduation requirements (78% versus 70%), although the difference does not reach statistical significance.

On the basis of these results, it appears that the NSSWT program was modestly successful in its goal to enable participants to obtain a Nova Scotia high school completion certificate. Given the additional time demands occasioned by participation in the program, this is a noteworthy accomplishment.

The results with respect to eligibility for admission to university are less positive. In both Grades 11 and 12, participants who completed the program were somewhat less likely than their comparison counterparts to take five or more university-preparatory classes. For admission into university, Grade 12 is the crucial year and in that year 48 percent of the participants, and 56 percent of the comparison students, met or surpassed the minimum university-entrance requirement of five university-preparatory classes.

Effect of program participation on marks

An important issue that requires assessment concerns the effect on marks that might be linked to participation in the NSSWT program. Since the NSSWT project did not follow an experimental design in all sites (i.e. there were an insufficient number of applications to the program to permit complete random assignment of students into participant and comparison groups), it is necessary to control for any initial differences in marks between the participant and comparison groups. One way of doing this is to use individual "change scores" in the analysis. This involves looking at the increase or decrease in marks between years, rather than examining just the post-participation (Grade 11 or Grade 12) marks. This is the procedure used here for assessing the effects of marks in attrition.

Because the NSSWT program was designed as a two-year program to be delivered in Grades 11 and 12, and since both students and project coordinators reported that Grade 12 is a particularly heavy year, it is advisable to break the effect of participation into several parts.

- **First-year effect.** This will be measured by comparing the marks obtained prior to participation in the program (Grade 9 and 10) with those obtained in the first year of the program (Grade 11).
- **Second-year effect.** Since Grade 12 is a year in which both social and academic demands are supposedly high on students, it is necessary to isolate the effect participation in the program had on the Grade 12 marks. This is done by comparing Grade 11 with Grade 12 marks.
- **Total effect.** It is possible that the effect on marks of participation in the program is a cumulative one that is not clearly visible either in the first or the second year of participation. To capture the total effect, the marks obtained prior to participation will be compared to the marks received in Grade 12.

As already seen, attrition from the NSSWT program between Grade 11 and Grade 12 was severe enough to potentially contaminate the comparison between the first-year and second-year effect. For this reason, the analysis in the remainder of this chapter focuses on the NSSWT graduates, defined as those participants who completed both years of the NSSWT program. The marks of these NSSWT graduates will be contrasted with those of the comparison group.

The curriculum structure of Nova Scotia high schools, like those in most provinces, is such that certain classes are mandatory and others elective. Of the mandatory ones, English and mathematics are of special importance for possible admission into post-secondary institutions; performance in these subjects will be analyzed separately. Additionally, the GPA will be used as a measure of overall performance. Since previous analysis (see Chapter 2) has shown that marks in SWT tend to be higher than average, this mark is excluded from the measure of GPA used here. Otherwise, any difference in overall academic performance found between participant and comparison students might be due to the artifact of high average marks in SWT.

Table 4-5 presents the change in marks between Grades 10 and 11, Grades 11 and 12, and finally between Grades 10 and 12. The first column of numbers measures the first-year effects of participation on marks. The negative numbers indicate that the Grade 11 marks are, on average, lower than the Grade 10 marks. This merely shows that grading standards in Grade 11 are stricter than in Grade 10. What is of importance here is that participants who completed the program do not fare worse than the comparison group.

Table 4-5

Changes in GPA, English and mathematics marks between Grades 10 and 12

	Mean change		
Change in GPA	Grade 11-Grade 10	Grade 12-Grade 11	Grade 12-Grade 10
NSSWT graduate	-.96	-1.00	-2.13
Comparison	-1.94	.82	-.51
Change in English marks			
NSSWT graduate	-1.08	.01	-1.36
Comparison	-1.83	.06	-.78
Change in mathematics marks			
NSSWT graduate	-3.42	-.93	-5.42
Comparison	-3.97	.09	-4.90

N=422 (NSSWT graduate=126; comparison=296)

Source: High school transcripts, 1995 and 1996 cohorts

Indeed, on all three comparisons, NSSWT graduates performed slightly better than the comparison group in the first year of the program. The average mark for the comparison group, for example, decreased just shy of two points (-1.94) on average, compared with a somewhat smaller drop of just under one point among those who completed the program. The drop in mathematics marks is most severe for both groups (-3.42 and -3.97 for participant and comparison groups, respectively). None of the differences in mean marks between Grade 11 and Grade 10 is statistically significant.

The conclusion to be drawn is that program participation had neither an adverse nor a beneficial effect on Grade 11 academic performance. The fears that the time demands of the program would cause academic performance to suffer are not substantiated. If anything, the reverse is the case, since there is a consistent tendency for NSSWT graduates to do better than the comparison group.

Although no significant difference was found between the participant and the comparison groups in their typical academic performance, an important difference emerged which is reflected in the standard deviation of their change scores (not shown). The standard deviation is a measure of dispersion; the higher the standard deviation, the more dissimilar members of that group are on the attribute being measured. The standard deviation of changes in mathematics marks is sufficiently higher for participants who completed the program than it is for the comparison group to rule out chance fluctuations.

This difference implies that the change in mathematics performance is especially variable for those who participated in the NSSWT program. The direct implication of this is that a higher percentage of participants' mathematics marks deteriorated substantially between Grades 10 and 11. But likewise, a higher percentage of participants' marks improved substantially over the course of that year. The two effects (above-average deterioration of marks and above-average improvement of marks) cancel each other out, so that on average there is no significant difference in average marks between the NSSWT graduates and the comparison group. This finding indicates that the NSSWT program had different effects for different participants. For some, it may have spurred them on to do better in mathematics. For others, the increased workload may indeed have caused their mathematics mark to suffer. Why should it be specifically the mathematics performance and not English or the general performance? This is a difficult question, which cannot be satisfactorily answered here. Perhaps it is connected with the fact that mathematics is considered the most demanding course and therefore most sensitive to the amount of time devoted to it.

There is some evidence that the heavy time demands associated with Grade 12, in conjunction with participation in the NSSWT program, had a modestly deleterious effect on marks that year. The second column of Table 4-5 shows that, relative to the comparison group, participants' average and mathematics marks declined more. The difference in GPA reaches statistical significance.

Having established that participation in the program has no negative effects on English, mathematics or overall marks in the first year of participation, but that it had a modestly adverse effect on some marks in Grade 12, what was the cumulative effect? Such an effect can be captured by comparing marks obtained prior to participation in the program (Grade 10) with those received at the completion of the program (Grade 12). This information is shown in the final column of Table 4-5.

None of the differences between the NSSWT graduates and the comparison group is statistically significant, although in all three comparisons the drop in marks between Grade 10 and Grade 12 is somewhat greater for the participants. It is reasonable to conclude, therefore, that participation in the NSSWT program may have had a mildly negative effect on participants' academic performance in their final year.

One limitation in the analysis so far is that comparisons have been based on marks in a single year. Academic performance fluctuates from year to year for various reasons. It would be better, therefore, if the benchmark was based on several years' marks. This can easily be done using a statistical technique known as ordinary least squares regression. Using this method involves three steps. The first step, which can be thought of as the prior performance step, estimates the Grade 11 marks solely on the basis of the academic performance in Grades 9 and 10. In this step, any initial differences between participant and comparison students are effectively taken into account, since each student's subsequent (Grade 11) academic performance is tied to his or her prior Grades 9 and 10 performance. The second step adds participation in the program into the equation. This assesses whether the academic performance of the participants, as a group, differs from that of the comparison students, after taking into account initial differences. The final step assesses the possibility that the program affected participants differently. For example, it may be that the academic performance of weaker students is particularly facilitated by their participation, compared to that of the stronger students. This possibility seemed likely given the high variability of the participants' Grade 11 change scores in mathematics. Such three-step regression analyses were performed to calculate the expected Grade 11 marks.

The results (not shown) were quite clear: for both the GPA and the English mark, the prior performance step sufficiently accounts for the Grade 11 performance.[5] There is no evidence that taking part in the NSSWT program interfered with the participants' academic performance in these two areas. Rather, it was neutral in these respects.

In contrast, for the mathematics mark, participation interacts with prior performance, indicating that the Grade 11 mathematics mark is affected in a complex fashion by participation. The specific nature of the effect is shown in Table 4-6: NSSWT graduates whose prior performance in mathematics was poor improved significantly more than did comparison students in a similar situation. For example, students whose Grade 9 and 10 marks were a borderline pass were estimated to obtain a mark of

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[5] Detailed description of the regression results can be found in Thiessen (1998c).

Table 4-6

Estimated Grade 11 mathematics mark

Average of Grade 9 and 10 mathematics marks	Estimated Grade 11 mark for: Participant	Comparison
50	56	52
60	61	59
70	65	66
80	70	72
90	74	79

N=422 (participant=126; comparison=296)

Source: High school transcripts, 1995 and 1996 cohorts

56 in Grade 11 if they were in the program, but only 52 if they were not in the program. In contrast, participants whose Grade 9 and 10 mathematics marks were high could expect their marks in mathematics to deteriorate more than that of the comparison group. These regression findings corroborate the earlier findings with the change scores.

The same three steps, with one refinement (the Grade 11 mark is now treated as part of the *prior performance* step) can be used to assess how much participation in the NSSWT program affected specifically their performance in Grade 12. For both English and mathematics marks, the prior performance step sufficiently explains the Grade 12 mark. For the overall academic performance, however, there is reason to believe that the Grade 12 performance of participants was negatively affected. From the regression equation, the best estimate is that the GPA of participants, after adjusting for their prior academic performance, was almost three percentage points (2.88) lower than among the comparison students. This finding supports the conclusion that program participation adversely affected overall academic performance, but only in the final year of high school.

University entrance requirements

Previously, it was reported that attending university was the goal for most students. Further, it was found that some participants, parents and educators feared that participation in the NSSWT program might compromise that goal. Regardless of whether university attendance was initially a realistic goal, the focus here is on whether university attendance was ultimately an option. Specifically, did participants meet university-admission requirements, and is there any reason to believe that they were less likely than the comparison group to achieve these?

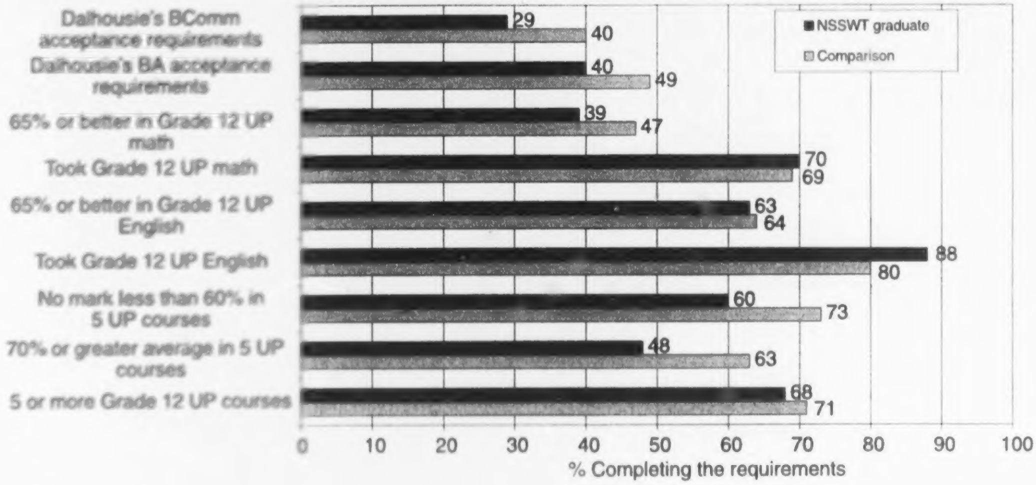
University-admission requirements are variable. Each institution sets its own requirements, and within institutions different programs often impose their own specific requirements. The tactic used here is to use the admission requirements to several different programs in one specific university – Dalhousie University – to which some participants applied. It was not feasible to examine entrance requirements for all institutions to which the students applied. The requirements for Dalhousie University are similar to entrance requirements to most universities in the area.

Admission to university depends on high school students fulfilling both general (core) and program-specific requirements. The three most popular programs at Dalhousie University that are open directly to high school graduates are those that lead to a Bachelor of Arts (BA), a Bachelor of Science (BSc) and a Bachelor of Commerce (BComm) degree. The common eligibility requirements are five courses taken at the university-preparatory or honour's level with an overall average of 70 percent or better; English, with a minimum mark of 65 percent; and no mark less than 60 percent in the other four subjects. All three programs also require that at least one subject be taken from the following list: Biology, Chemistry, French, Geography (or Global Geography), German, History (or Global History), Latin, Mathematics or Physics. In addition, applicants to the BA program are required to have taken two subjects from the above list, while both BSc and BComm degrees require having taken a mathematics course, with the BSc requiring a more difficult one known as the preparation for calculus math. Eligibility for admission to a BSc also requires that at least one science subject be taken. Finally, for all three programs, two of the subjects must come from either the list above, or the following list: Calculus, Comparative Religion, Computer-Related Studies, Data Processing, Economics, Environmental Studies, Geology, Journalism, Law, Modern-World Problems, Music, Political Science, Sociology, Spanish or Theatre. For many universities, the marks received are frequently more important than the distribution requirements. For example, the *1998-99 Undergraduate Guide* for Dalhousie University (p. 22) states that "(s)tudents with a good academic standing (75% or higher) are encouraged to apply even though they may not meet the standard distribution requirements." The main difference in admission requirements between the three programs is whether, and which, mathematics is required.

The information in Figure 4-7 provides disappointing news for the proponents of the NSSWT program. It indicates that, although NSSWT graduates were about as likely as comparison students to take various Grade 12 university-preparatory classes, their performance in them was substantially lower. For example, less than half the NSSWT graduates (48%) earned at least a 70 percent average in their top five university-preparatory classes, whereas more than three out of every five (63%) comparison students achieved such a result. Likewise, only 39 percent of the NSSWT graduates earned at least 65 percent in a university-preparatory mathematics class, in contrast to 47 percent of their comparison counterparts. As a result of the lower level of academic performance, approximately 10 percent fewer NSSWT graduates met all the requirements for entrance into Dalhousie University's BA or BComm programs.[6]

Figure 4-7

Eligibility for acceptance into Dalhousie University's Bachelor of Arts (BA) and Bachelor of Commerce (BComm) programs by participation status



Note: UP means university-preparatory

N=422 (NSSWT graduate=126; comparison=296)

Source: High school transcripts, 1995 and 1996 cohorts

Site differences

Having shown that some academic performance outcomes differ between participants and comparison students, the question becomes whether important site differences exist in this respect. The first step in answering this question is to examine whether the six sites differ in the percentage of participants and comparison students who complete all high school graduation requirements. The answer could serve as an important indicator of the extent to which the particular implementation attained its goal, namely providing NSSWT students with the certification necessary for post-secondary education. Likewise, having established that the NSSWT graduates are less likely to meet certain university-admission requirements, do sites differ in the variety of post-secondary educational options graduates have?

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[6] The same pattern holds for admittance to the BSc program (not shown).

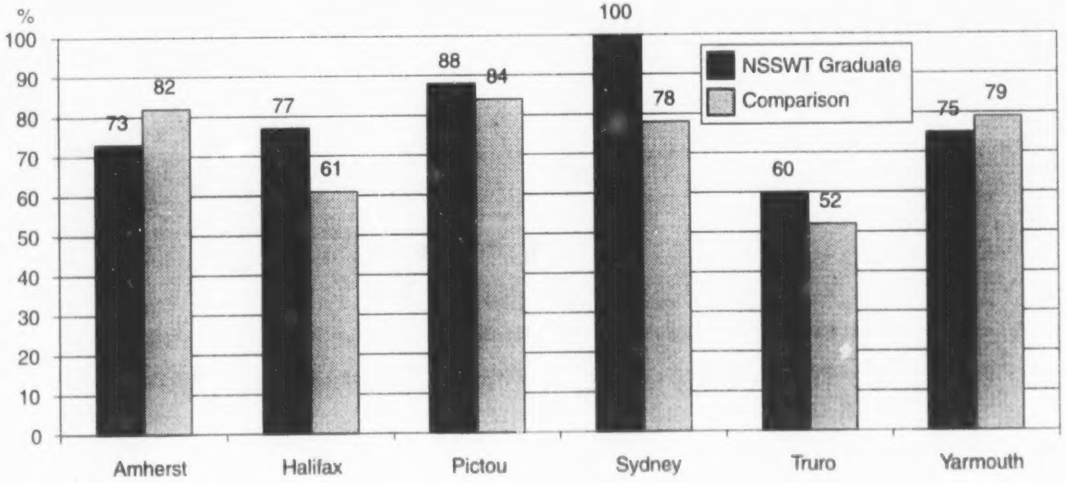
Figure 4-8 reveals substantial site differences in high school completion rates. Note that all of the Sydney NSSWT graduates fulfilled all high school graduation requirements. In contrast, only three in every five Truro NSSWT graduates did this.

Important to note also is the substantial school variation for the comparison groups. Among these, more than four in every five (84%) comparison students in Pictou met all graduation requirements but barely half (52%) of those in Truro achieved this.

A rough correspondence between the high school completion performance of the comparison students and that of the NSSWT graduates is evident. Looking at the

Figure 4-8

Completion rates of all high school graduation requirements by site and program completion status



N=422 (NSSWT graduate=126; comparison=296)

Source: High school transcripts, 1995 and 1996 cohorts

extremes, in Pictou 88 percent of NSSWT graduates and 84 percent of comparison students met all high school completion requirements. Contrast this with Truro where only 60 percent of NSSWT graduates and 52 percent of comparison students performed at this level. This suggests that a "school effect" exists in addition to a "program effect." That is, some schools succeed better than others in meeting graduation requirements. It is to be expected that this school effect would spill over to the performance of NSSWT participants, acting as an impediment to graduation in some sites and an impetus in others.

The school effect finding also cautions against using an absolute standard in assessing program effects. For example, although the Truro NSSWT graduates had the lowest high school completion rates when compared to NSSWT graduates of other sites, this should not be taken as an indicator that the program was ineffective in this respect. Indeed, NSSWT graduates actually performed better than comparison students in this site. In contrast, in Amherst and Yarmouth, NSSWT graduates were less likely to complete the high school graduation requirements than their counterparts. It would be more appropriate to conclude that the Amherst site, for example, was not effective in accomplishing the graduation objective, despite having a higher percentage of students who qualified to graduate than the Truro site did.

Some of the conclusions about site differences with respect to meeting high school graduation requirements apply also to meeting admission requirements to university programs. Table 4-7 reveals, for example, dramatic site differences in the likelihood of meeting various university-admission requirements. At the extremes, less than 1 in 20 Truro NSSWT graduates (4%) met all requirements for admission to Dalhousie University's BA program while two thirds of the Yarmouth NSSWT graduates were eligible for this program.

Substantial differences also characterize the comparison students, although the site differences are not as stark as among program participants. Less than half (48%) of comparison students in Halifax to three-quarters in Amherst met the admission requirements for Dalhousie University's BA program. More importantly, the approximate site-level correspondence between the performance of the NSSWT graduates and the comparison group has vanished. It is no longer the case that the likelihood of the NSSWT participants meeting any given requirement is predictable from that of the comparison group at that site. Two examples should suffice: the Amherst comparison group, with 68 percent qualified for Dalhousie University's BComm program, ranks number one for comparison students. NSSWT graduates at that site, on the other

Table 4-7

Completion of university admission requirements by site and participation status

	Amherst		Halifax		Pictou		Sydney		Truro		Yarmouth	
	G %	C %	G %	C %	G %	C %	G %	C %	G %	C %	G %	C %
Took at least 5 UP courses	54	89	69	70	88	82	100	93	50	90	75	88
Earned at least 70% in top 5 UP courses	54	82	54	56	68	74	50	56	9	60	67	79
Received no mark less than 60% in top 5 UP courses	77	79	54	59	72	74	57	56	14	69	83	76
Took Grad. 12 UP math	68	93	65	79	88	82	100	96	64	85	50	65
Received 65% or greater in Grade 12 UP math	41	75	46	50	52	47	50	48	18	62	33	59
Took Grade 12 UP English	91	96	96	96	96	95	100	96	82	94	83	97
Received 65% or greater in Grade 12 UP English	50	79	69	79	84	87	86	59	36	75	75	82
Meets requirements for Dalhousie BA program	41	75	38	48	64	55	43	52	4	54	67	71
Meets requirements for Dalhousie BComm program	27	68	31	43	52	40	36	37	0	52	33	56

Note: UP means university-preparatory; G=NSSWT graduate; C=comparison

N=422 (NSSWT graduate=126; comparison=296)

Source: High school transcripts, 1995 and 1996 cohorts

hand, had only a 27 percent qualification for this program, the second lowest of all participant performances. The reverse situation can be found in Pictou. Just over half (52%) of the NSSWT graduates met the BComm admission requirements, the best site performance for participants. Only two in five comparison students, however, met the admission requirements, the second-worst site performance for the comparison group.

Note also that Pictou is the only site in which the NSSWT graduates had a higher chance of meeting Dalhousie University's admission requirements than did the comparison group. It is in all likelihood more than coincidental that Pictou participants did so well both in meeting university-entrance requirements and in keeping their attrition rate low, particularly in the second cohort.

Although the "school effect" does not correlate with the performance of the NSSWT graduates with respect to meeting university-admission requirements, a clearer "program effect" emerges. Specifically, completion of high school graduation requirements by site correlates with meeting university-admission requirements among NSSWT graduates. Pictou, for example, is a site where participants had an above-average likelihood of fulfilling high school graduation requirements; it is also the one site where participants were likely to meet typical university-admission requirements. In contrast, Truro participants, at 60 percent, were least likely to meet high school graduation requirements; they were also least likely to meet typical university-entrance requirements.

Summary of educational performance analysis

The analysis of the relationship between participation in the NSSWT program and subsequent educational performance indicates a complex pattern. On the one hand, participation seems to have a levelling effect. Participants, whose prior educational performance was poor, improved somewhat. At the same time, those whose prior educational performance was at the top end subsequently did less well than the comparison students.

Two separate dynamics may be at work here. First, the NSSWT program may stimulate and motivate participants who have not been performing to their potential. This would raise the marks at the bottom end. Second, participants with top marks fare less well due to the heavy time demands of the program. They have less time available to concentrate on their other studies.

Another consequence of program participation is lower academic performance in Grade 12, which is a threat to the successful fulfilment of university-admission criteria. Given the social value placed on obtaining a university education, policy makers will need to address the lowered likelihood of participants' meeting these criteria.

Program effects

Despite the program's heavy time demands, most participants gave the program high marks. More than four in every five participants stated the program met or exceeded their expectations (not shown). Likewise, over half would "definitely" recommend the program to others. The perceived fit between the in-school and work-experience components was more problematic; less than a third of the participants felt the program complemented other aspects of their school "very well."

In light of these generally favourable sentiments, the remainder of this chapter will assess how the program affected participants in areas such as skill acquisition, self-image and self-confidence, educational and occupational aspirations and plans, and assessment of their future.

Use of career-guidance services

One goal of the NSSWT program was to link school and work more closely. In this way, it was thought, students would be better guided in their transitions from school to either work or post-secondary education. For instance, the program might stimulate greater use of the school's career-guidance services. Table 4-8 shows the extent to which various career-guidance services were used by participants and comparison students in senior high school.

It is important to remember that no significant differences existed between the two groups in their use of career-guidance services at the beginning of Grade 11, prior to the start of the program (see Chapter 3). By the end of Grade 12, however, interesting differences have emerged.

On the one hand, during Grade 11 it appears that more of those in the comparison group had meetings at their school with business representatives or visits to business or industry. On the other hand, more of the participants reported school-arranged job interviews (outside school), career placements and more

Table 4-8

Use of career-guidance services by participation status and year

	Grade 11		Grade 12	
	Participant %	Comparison %	Participant %	Comparison %
Instruction in résumé writing	64	51	53	51
Post-secondary course/program selection	47	52	73	74
Inventories to determine job/career interests	35	33	34	42
Job fairs	28	27	31	28
Practice interviews	29	20	21	18
Visits with business or industry representatives at school	17	27	26	26
Job search	26	16	27	16
Career placement	26	11	26	10
Job shadowing or mentoring	18	17	22	19
School-arranged visits to a business/industry	13	17	26	19
School-arranged job interviews	21	6	16	5

Grade 11 N=392 (participant=176; comparison=216); Grade 12 N=344 (participant=141; comparison=203)

Source: Grade 11 and Grade 12 student questionnaires, 1995 and 1996 cohorts

assistance with job-search techniques[7] and more experience with writing résumés. These experiences were generally reported by more participants in both Grade 11 and Grade 12.[8]

Overall, the most frequently used guidance services, reported by between about half and three quarters of both groups in both Grade 11 and Grade 12, were résumé writing and post-secondary course selection. Use of services to help with post-secondary course selection was used by close to three quarters of the students by the time they had completed Grade 12.[9]

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[7] At the start of Grade 11, less than 10 percent of those in either group reported school-based assistance with job-search techniques.

[8] These three activities were also part of the in-school component of the NSSWT program. It is of course possible that the participants did not take care to distinguish between career-guidance services offered by the school and those provided by the program.

A simple summary measure of the use of career-guidance services is to count the number of such services used. During Grade 11, participants used, on average, 3.2 different career-guidance services, whereas the comparison students used only 2.7 such services. The corresponding figures for Grade 12 are 3.5 and 3.0, respectively. These differences are not statistically significant but they suggest that the program stimulated participants somewhat to use services and information relevant to youth transitions to work and post-secondary education.

Despite greater use of their schools' career-guidance services, participants stated that the program does not link well with other aspects of their school experience. Less than a third of these students (29% in Grade 11 and 26% in Grade 12) felt that the program complemented other aspects of their schooling very well (not shown). From the perspective of the participants, substantial room for improvement exists for integrating school with work issues.

Facilitating the transition out of high school

In a very real sense, the overall aim of the NSSWT program was to change the high school experience of young people in a way that would facilitate their transition out of school and into either the labour market or a post-secondary institution. In the 1995 cohort follow-up interview, students were asked to reflect on their overall high school program.

Remember that the high school experience for NSSWT graduates included the in-school and work experience components. Obviously, these were not part of the high school program for comparison students. In all other respects, however, these two groups should be comparable, since they attended the same schools and did not differ in any substantial way at the beginning of high school. If the effects of the high school program differ for these two groups, it would be reasonable to attribute the difference to the interventions.

The results, shown in Table 4-9, should be gratifying to the NSSWT proponents. Participants responded systematically, and often markedly, differently to almost all aspects of their high school program than comparison students. Specifically, the participants were more likely to rate their high school program as having had very positive effects on all their career and labour market possibilities. Only with respect to post-secondary education (the chances of getting accepted and the choice of field of study) were participants less positive than comparison students.[10]

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[9] Not surprisingly, services to help with high school course selection were also quite highly rated; they were used by 90 percent of the students in Grade 11 (not shown).

Table 4-9

Overall high school program effects by participation status

How much would you say your overall high school program had the following effects?	% reporting *Very Much*	
	Participant	Comparison
Gave you good work experience	35	12
Helped you use and develop your job-relevant skills and abilities	32	11
Helped you decide what to do after high school	37	25
Improved your chances of getting a better-paying job after your schooling	30	19
Improved your chances of getting a more interesting job after your schooling	33	15
Improved your chances of getting accepted into a post-secondary program	52	58
Helped you explore career options	47	29
Helped you develop more realistic job plans	42	23
Improved your knowledge of the job market	32	20
Improved your job search skills	37	22
Provided contacts with potential employers	32	8
Influenced your choice of post-secondary field of study	28	35

Note: Between 58 and 59 participants did not answer one or more of these questions.

N=215 (participant=71; comparison=144)

Source: 1995 cohort follow-up interview

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[10] One would expect NSSWT leavers, if they were essentially random, to occupy a position midway between NSSWT graduates and comparison students, since they received some, but not all, of the NSSWT interventions as part of their overall high school program. This is decidedly not the case. On all issues except one (exploring career options), NSSWT leavers paint the least positive picture of their high school program, at least with respect to career, labour market and higher-education factors. It is thus quite clear that it would be inappropriate to think of leavers as having received some, but not all of the benefits of participation in the NSSWT program.

Participants and their parents were asked a similar question about the effects specific to the NSSWT program. More than half (55% to 82%) of the participating students reported that the program helped with career-related issues: gave them good work experience, helped them develop their skills and abilities, helped them explore career options, and helped them develop more realistic job plans (not shown). Fewer of them saw it as helping with post-secondary options.

While parents shared many of the participants' positive views on the program, they were more tempered in their praise. Nevertheless, they described it as having helped their child in various ways.

Implementation effects

The *Design and Implementations* chapter detailed the manifold variations in the specific implementations at the six sites. An inherent limitation of the scientific method is that if the number of factors that vary exceeds the number of cases, then it is not possible to determine scientifically which of the factors produced a given result. That is the situation here, where the number of differences in how sites implemented the NSSWT program is greater than the actual number of sites. With appropriate caution and attention to detail, it is nevertheless possible to gain insight into what aspects of the implementation are associated with particular outcomes. That is attempted in this section.

Near the end of the program, participants were asked to rate how much of an effect the program had in a variety of areas. Table 4-10 shows that these varied by site. A simple measure of site variation is to compare the site with the highest percentage to the site with the lowest percentage giving a particular response.

By this measure, site variations were particularly large on whether the program gave them good work experience, helped them explore career options, improved their knowledge of the job market and provided contacts with potential employers. For example, 78 percent of Sydney participants responded that the program had very much improved their knowledge of the job market, but only a third of the Truro participants felt this way, producing a 45 percentage point difference between the sites. Similarly, nearly all participants in Truro (95%) very much felt the program gave them good work experience, but fewer (30 percentage points) of their Haligonian counterparts expressed such a view.

Table 4-10

Endorsement of program effects by site

Percent reporting the program *Very much* had this effect:	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
	%	%	%	%	%	%
Gave you good work experience	83	65	83	94	95	75
Helped you use and develop your skills and abilities	75	65	55	61	76	58
Helped you decide what to do after high school	46	45	46	50	43	58
Improved your chances of getting a better-paying job after your schooling	50	39	31	33	48	42
Improved your chances of getting a more interesting job after your schooling	46	32	31	39	52	42
Improved your chances of getting accepted into a post-secondary program	29	42	21	39	43	33
Helped you explore career options	54	48	76	56	76	83
Helped you develop more realistic job plans	63	45	64	50	52	55
Improved your knowledge of the job market	57	48	34	78	33	50
Improved your job-search skills	38	32	45	56	33	42
Provided contacts with potential employers	63	35	52	50	48	50
Influenced your choice of post-secondary field of study	38	45	31	44	43	42
N	24	31	29	18	21	12

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts

A second important point to be noted in the above table is that each site developed its own strengths. That is, every site was "best" in at least one respect. Amherst was rated best among the six sites in providing contacts with potential employers and in improving chances of getting a better-paying job after school. Halifax participants were most likely to feel the program had very much influenced their choice of post-secondary study. In Pictou, the program most helped to develop realistic job plans. Sydney excelled in improving participants' knowledge of the job market and improving their job-search skills. Truro, according to its participants, gave them good work experience.

helped them use and develop their skills and abilities, improved their chances of getting a more interesting job after school and improved their chances of getting accepted into a post-secondary program. Finally, Yarmouth participants felt the program had very much helped them explore career options and helped them decide what to do after high school.

Although each site had its own characteristic strengths, were there any underlying factors that fostered especially positive responses? One such factor could be the teaching status of project coordinators. As the name indicates, the school-to-work transition program bridges two domains – school and work. The knowledge and skills required to be an effective project coordinator might not be identical to those required to be an effective teacher. In three sites (Amherst, Pictou and Truro), the project coordinator was a teacher. Since teachers have experience in effective classroom techniques, they might know how to make the in-school component particularly attractive. Table 4-11 shows participants' endorsement of different aspects of the in-school component in sites where the project coordinator was a teacher compared to those sites where this was not the case.

In all aspects, except the school's support among Grade 12 participants, the in-school component was better received in sites where the project coordinator was a teacher than otherwise.[11] In most respects, the differences are substantial, often as much as 20 percentage points. These findings lend strong support to the possibility that teachers are better able to organize and deliver the in-school component than non-teachers.

Although teachers may be better suited for the in-school component, one might expect non-teachers to have the edge when it comes to organizing and implementing the work experience component. Information relevant to this is given in Table 4-12. It is clear that here, too, sites with teachers fared better than the others. Although the differences are smaller than what was found for the in-school component, there is little doubt that the work experience component was liked more in sites where the project coordinator was a teacher.

Sound reasons existed for expecting teachers to have better in-school components than non-teachers. But these reasons do not extend to expecting better work experience components. The fact that the latter was also found, albeit in smaller measure, creates

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[11] Although the project coordinator may have little control over how much the school endorses or supports the NSSWT program, one might have expected teachers to be more accepted, and therefore the program as well, than non-teachers.

Table 4-11

Rating of the in-school component by teaching status of the project coordinator

	Grade 11		Grade 12	
	Teacher	Non-teacher	Teacher	Non-teacher
Very much liked:	%	%	%	%
Total length of the in-school component	34	13	35	13
Length of specific workshops, seminars	33	19	25	13
Total number of workshops, seminars	32	24	34	20
Content of the in-school component	46	28	40	32
Guest speakers	52	32	39	31
School's support of the in-school component	24	21	16	18
Time of day	49	20	55	23
Time of the week	N/A	N/A	51	28
N	79	92	75	60

Note: Preference about the time of the week was not asked in the Grade 11 questionnaire.

Source: Grade 11 and Grade 12 student questionnaires, 1995 and 1996 cohorts (participants only)

Table 4-12

Rating the work experience component by teaching status of the project coordinator

	Grade 11		Grade 12	
	Teacher	Non-teacher	Teacher	Non-teacher
Very much liked:	%	%	%	%
Total length of the work experience	49	40	46	27
Tasks	48	43	50	36
Employer's support	60	61	70	59
Wage/payment	35	23	30	20
Specific task-related skills developed	57	46	57	44
General skills developed	59	47	63	47
N	79	92	75	60

Source: Grade 11 and Grade 12 student questionnaires, 1995 and 1996 cohorts (participants only) some uncertainty about the underlying reasons for the differences. At the very least, it must be emphasized that participants' reaction was better in some sites that did not have a teacher as project coordinator than other sites which did. For example, participants in Yarmouth liked the in-school component better than those in Truro, despite the fact that the project coordinator in Truro was a teacher but the one in Yarmouth was not.

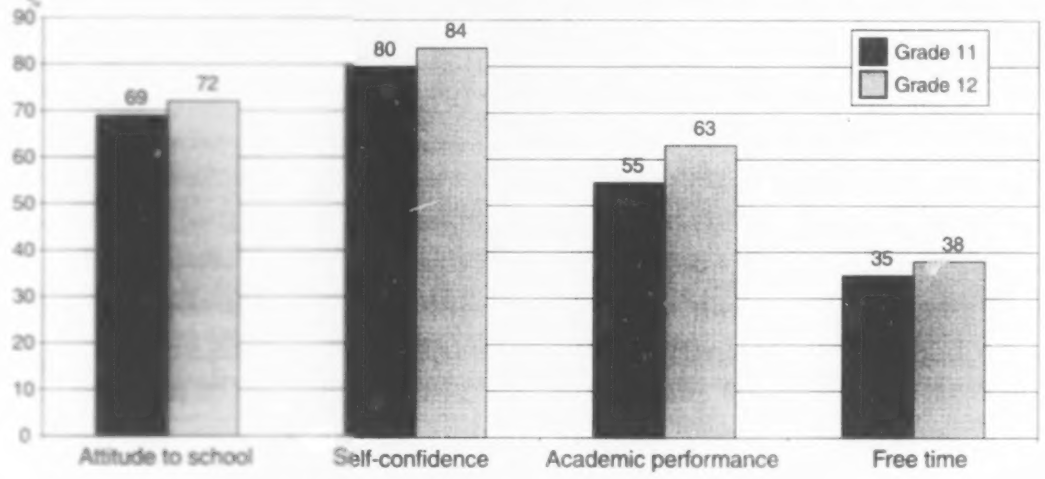
Effects on student attitudes

It is generally felt that self-confidence contributes to performance. This may simply reflect the fact that what is perceived as real, is real in its consequences. This type of self-fulfilling prophecy could well operate with respect to academic performance. Figure 4-9 documents that participants attributed a variety of positive effects to their involvement in the NSSWT program. About 8 in every 10 felt the program increased their self-confidence (80% and 84% in Grade 11 and Grade 12, respectively); about 7 in every 10 reported the program positively affected their attitude to school; about 6 in every 10 thought the program was instrumental in their academic performance (55% and 63% in Grade 11 and Grade 12, respectively). Finally, despite the heavy time demands of the program, sizeable proportions (35% in Grade 11 and 38% in Grade 12) actually felt the program had a positive effect on their free time. At first glance this appears contradictory, but part of this may be a halo effect. Since participants had a generally positive view of both the in-school and, especially, the work experience component, they may have generalized this positive response to other aspects as well. Another part of the explanation might be that many participants learned to manage their time better. Both participants and their parents mentioned this quite often. By managing their time better, the program was perceived to have had a positive effect on their free time.

The data set provides another, more direct measure of program effects on the students' attitudes. At the end of Grade 12, both the participants and the comparison students were asked whether they agreed or disagreed with various positive and negative statements. Figure 4-10 shows that program participation did not materialize in positive self-images. For each of the four positive statements, the comparison group held somewhat higher self-images than those of the participants.

Figure 4-9

Perceived positive effects of participation in the program by year in school



Grade 11 N=171; Grade 12 N=133 (The decrease in total N is the result of attrition.)

Source: Grade 11 and Grade 12 student questionnaires, 1995 and 1996 cohorts

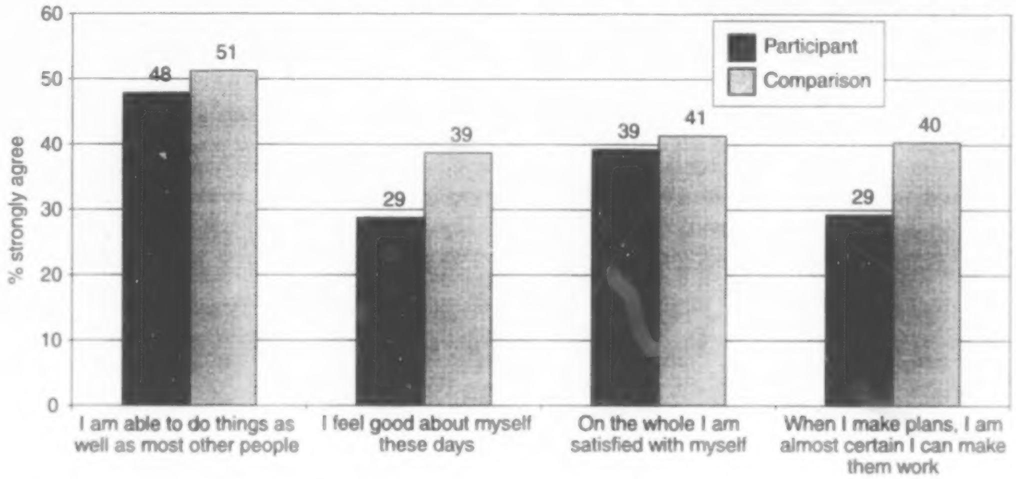
Likewise, participants were somewhat less likely to reject negative statements about their personal situation (see Figure 4-11). Taken together, these patterns indicate that participation in the program did not increase self-confidence or self-image.

What is to be made of the low self-image among the participants? Would it be appropriate to conclude that the program actually reduced self-confidence? Such a conclusion is probably not warranted. It is more likely that other factors, such as the marks obtained in school, underwrite their self-image. This possibility is strengthened by the fact that all of the self-image items correlated in a consistent fashion with the marks they obtained in the immediately preceding year (not shown). Since it has already been shown that participants had lower academic achievement, their lower self-image is probably a manifestation of their lower academic performance.

Given that the program did not impart better self-images to participants, it is not surprising that participants were neither more nor less optimistic about various events in their future. As shown in Figure 4-12, participants and comparison students were equally optimistic about their future. In a separate set of questions (not shown), the

Figure 4-10

Endorsement of positive self-image by participation status

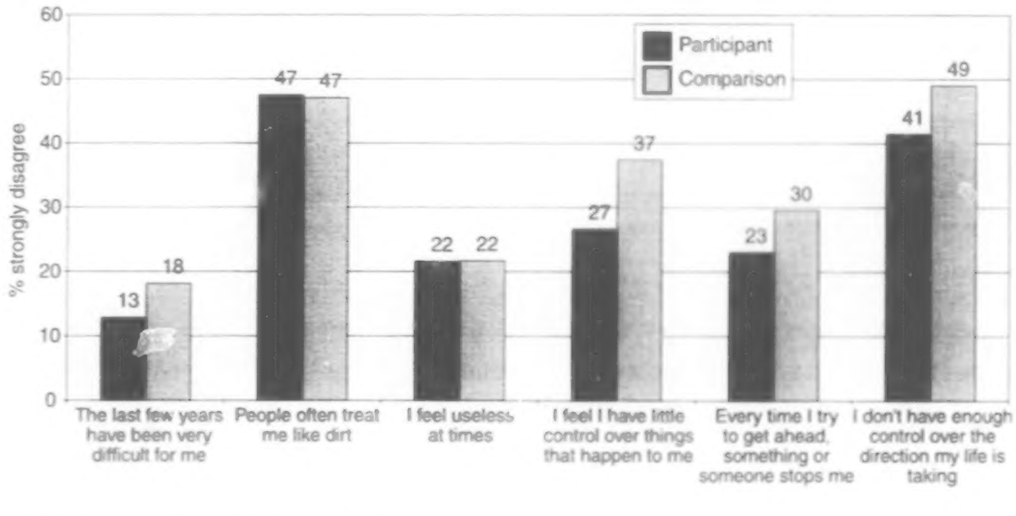


Participant N=140; comparison N=204

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts

Figure 4-11

Rejection of negative self-image by participation status

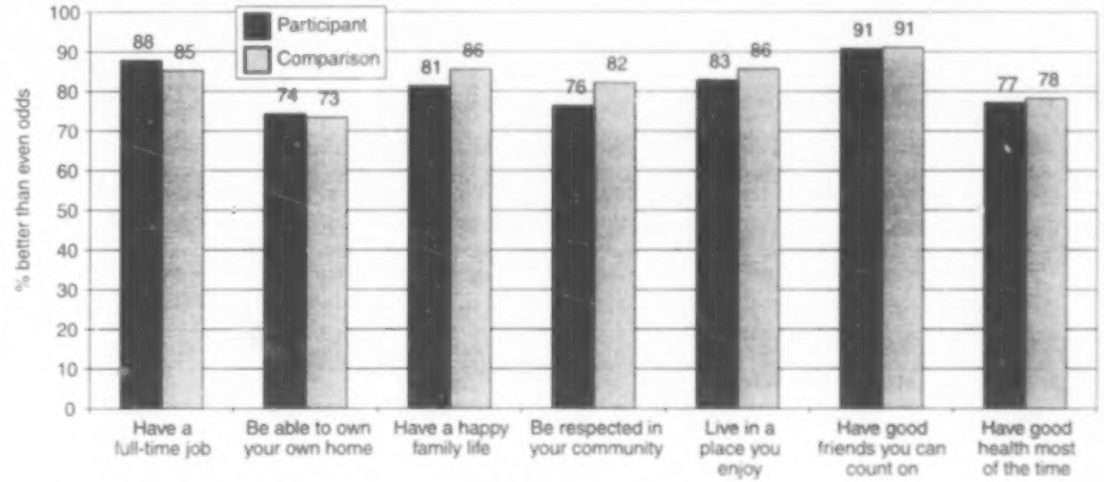


Participant N=140; comparison N=204

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts students described themselves as optimistic. When asked at the end of Grade 12, half the participants, and a similar percentage of comparison students, reported that they were "very optimistic" about their future.[12]

Figure 4-12

Perceived chances for future events by participation status



N=343 (participant N=140; comparison N=203)

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts

Skill development

If the program did not affect student attitudes, the question remains, what effect did it have on their skill development? Both the in-school and the work experience components were designed to facilitate the development of generic and specific work-related skills.

The expansion of the student labour market in the 1970s and 1980s resulted in a large majority of students having some paid work experience by the time they left high school. Most of these jobs, however, may not have been useful in helping young people increase their employability, or to become better informed or make better decisions about their future occupations. The main reason for this is that the opportunities to develop generic, work-relevant skills were usually absent because the skill level required in these jobs was so low.

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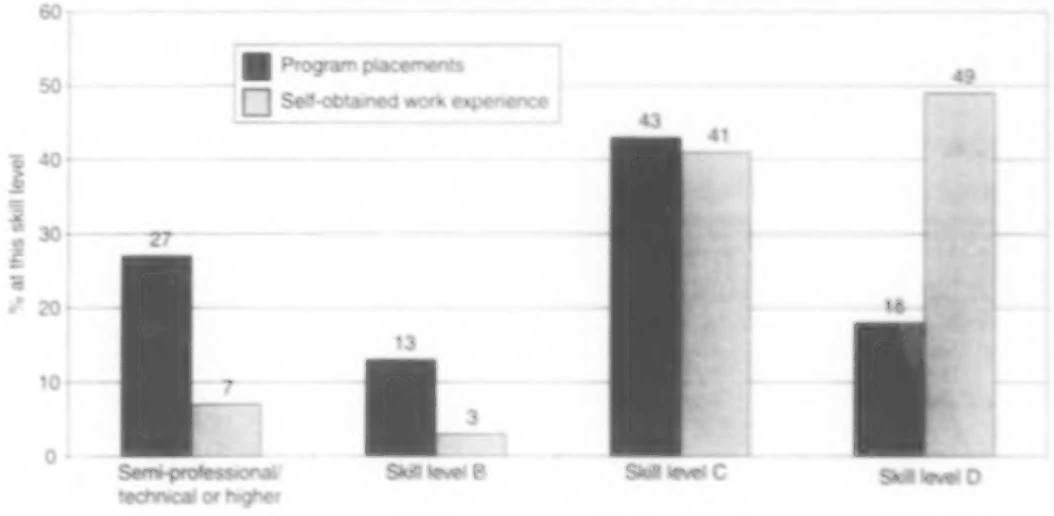
[12] Just slightly more than a third (36%) of the participants' parents reported the same level of optimism regarding their child's future (not shown).

In the NSSWT program, it was expected that the kinds of job placements secured by the project coordinators would be at a higher skill level than those the students would obtain alone. To assess whether this expectation was fulfilled, the skill level of the jobs students obtained on their own were compared with those obtained through the program. In Figure 4-13, the skill levels of all high school work experiences as part of the NSSWT program are given in the first column. The second column provides the identical information on non-NSSWT work placements. The comparison shows that the jobs held by the participants as part of the program were higher-skilled positions than those they, or the comparison group, obtained on their own. Note especially the large difference in the lowest-skill level. About half the jobs students obtained on their own are at this level. In contrast, less than one in five of these work experience positions were classified at the lowest level, skill level D.

Part of the rationale for placing participants in jobs that have somewhat higher skill demands was to give them the opportunity to develop generic work skills. It was felt that

Figure 4-13

Skill level of self-obtained work experience compared with program placements



Self-obtained work experience N=405; program placements N=219

Source: Grade 11 student questionnaire, 1995 and 1996 cohort; project coordinators' reports, 1995 cohort jobs with higher skill levels would not be as routine, providing greater opportunity to practise a variety of skills, such as reading documents, writing and working in a team.

Two sets of tests, the International Adult Literacy Survey (IALS), used in OECD comparative studies, and the American College Testing (ACT) WorkKeys, were administered to the 1995 cohort of students at the beginning of Grade 11 and at the end of Grade 12. Since the performance of the participant and comparison groups was somewhat different initially, multiple regression procedures were used to adjust for these differences. Table 4-13 gives the regression coefficients for the IALS and ACT tests.

Three types of effects are examined. The first column captures the maturation effect – prior performance predicts future functioning. The middle column estimates the average program participation effect, after adjusting for initial differences between participants and comparison students. The final column assesses the possibility that the program affected the skill development of participants differently, depending on the initial level of their skills. This column

Table 4-13

Regression coefficients (unstandardized slopes) of IALS and ACT skill attainment

IALS	Maturation effect	Program effect	Differential program effect
Quantitative			
Prior skill	.67*	.68*	.59*
Group		-.16	.01
Group x prior skill			-.17
Prose			
Prior skill	.67*	.68	.65*
Group		-.03*	.00
Group x prior skill			-.04
Document			
Prior skill	.47*	.47*	.58*
Group		-.01	-.14
Group x prior skill			.16
ACT WorkKeys			
Listening			
Prior skill	.52*	.52*	.29*
Group		-.06	-.12
Group x prior skill			-.36*
Writing			
Prior skill	.61*	.62*	.66*
Group		.07	.08
Group x prior skill			.07
Teamwork			
Prior skill	.41*	.41*	.38*
Group		-.03	-.02
Group x prior skill			-.06

*Statistically significant coefficient (p<.05)

Note: Group was coded so that participant = 1; comparison = 0.

N: IALS=178; ACT=161

Source: Initial and final IALS and ACT WorkKeys tests (1995 cohort only) helps answer the question of whether the effect of program participation on skill attainment was stronger (or weaker) among students who started at the lower end of these skills.

The most important conclusion that emerges from this table is that for none of the tests is there any evidence that the participant group improved more than the comparison group. In other words, the expectation that having somewhat higher-skilled jobs would translate into greater skill acquisition was not fulfilled. In only one of the six tests (the IALS Prose scale) was there an indication of a program effect. On this scale, participants in the program performed unfavourably relative to the comparison students, even after adjusting for initial differences between the two groups.[13] Further analysis (not shown) revealed that, on this test, the participants correctly answered one percent fewer items in Grade 12 than they did on the earlier test, while comparison students scored two percent better.

For the ACT results, after adjusting for initial differences, participants do not score significantly differently from comparison students. In two of the three tests (Listening and Teamwork) they score slightly lower, but in the third one (Writing) they score somewhat better.

In all six skills tests, the only consistent finding is the effect of prior performance on later performance.

The fact that the skills tests used in this analysis failed to detect positive program effects, but were able to capture maturation effects, is of some importance.[14] It indicates that the tests are calibrated finely enough to detect growth in the measured skills over a one-and-a half-year period. Since no program effects were detected, it is reasonable to conclude that the program had less (additional) effect on skills than the amount of improvement one would ordinarily expect just through maturation.

---

[13] Additionally, there is evidence of an interaction effect among the comparison students on the ACT Listening scale. Among the comparison students, their Listening score in Grade 12 is significantly more predictable from that scale score in Grade 11 than is the case for the participants. A variety of coincidental factors, not important to the task at hand, could account for such an effect.

[14] Maturation (improved performance between the first and second testing) is estimated by the "y-intercepts," or constant, in the regression equation. These estimates (not shown in the table) are all positive and statistically significant, indicating that students' skills developed measurably during this time.

The group setting in which these tests were administered may have affected the performance of some students. Additionally, it could be argued that self-assessments are perhaps equally important for employability, since self-assessments are likely to have a strong bearing on presentation at a job interview. For these reasons, it is worthwhile to assess the program's effect on self-assessments.[15]

Since the previous chapter revealed that participants considered themselves initially to have less skill attainment than comparison students in all eight areas, it is again necessary to employ regression analysis to correct for these initial differences. The results (not shown) reveal a significant program effect in the self-assessment of problem-solving skills. Participants improved their skills in this area more than the comparison group. This is an important effect, in light of the fact that employers put a high value on employees with good problem-solving skills (see Chapter 5). In the other skill areas, no significant program effects were found from the regression analysis.

Figure 4-14 compares the proportions of participant and comparison students in the 1996 cohort who rated their skills in the eight areas as high. Some of the initial differences remain. A much smaller proportion of participants than comparisons rated their skills as high in the areas of numeracy, interacting with others and giving information to others. In other areas, only minor differences between the groups remain. The smallest differences are in the areas of reading, problem solving and working in a team. Overall, the results suggest that the program was modestly successful in increasing participants' self-assessed skills in some areas.

Post-high school paths

School-to-work transition is more a journey than an event. It is a journey students often do not complete before they turn 30. This journey has several critical junctures. For most, completing high school is taken for granted, both by the student and their parents. Nevertheless, for a sizeable number, particularly boys, the decision to drop out of high school to join the work force is one decision-making point. Such students are not part of the NSSWT program. For the remaining youth, the first momentous decision concerns what to do after high school. Should they enter the labour market directly after graduation, or should they continue their education? If so, the question is in what type of institution.

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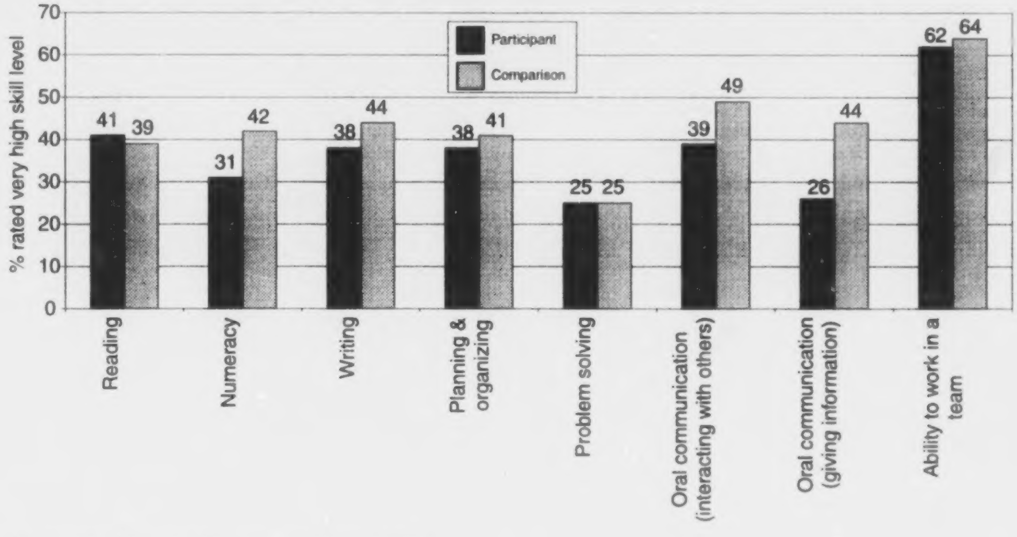
[15] Such information is available for the 1996 cohort only.

Figure 4-14

Self-assessed skill levels by participation status



N=166 (participant=61; comparison=105)

Source: Grade 12 student questionnaire, 1996 cohort only

This section describes the decisions, and the changes in choices, that participant and comparison students made. For post-high school plans, information on their initial choice at the beginning of Grade 11[16] is presented since there are indications that the participant and comparison group differed somewhat at this time. Figure 4-15 describes the post-high school paths the participant and comparison students expected to follow on a full-time basis.

Several patterns are evident. First, about a fifth of participants (21%) initially planned to get a full-time job immediately after high school and a similar proportion (19%) expected to do so when asked at the end of Grade 12. The comparison students found this option somewhat less attractive both initially and at the end, with 16 percent expecting to get a full-time job at both points in time. It would have been reasonable to expect that the in-school component might make participants reconsider the desirability of entering the labour market directly out of high school. The program did not appear to have this effect.

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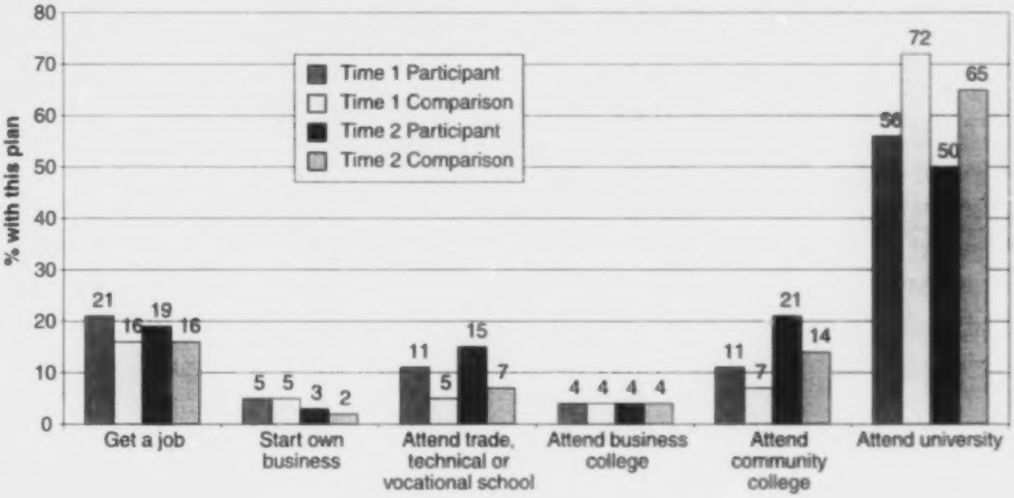
[16] The figures reported in this section will differ slightly from those in Chapter 3 because the Time 1 data are presented here only for that subset for whom there is also information at Time 2.

Figure 4-15

Post-high school plans by participation status and year



N=345 (participant=141; comparison=204)

Source: Initial student questionnaire (Time 1), Grade 12 student questionnaire (Time 2), 1995 and 1996 cohorts

Second, participants initially were less likely than comparison students to expect to attend university full time; this difference was maintained to the end of the program, when only half the participants expected to go directly to university, compared to almost two thirds (65%) of the comparison students.

Finally, program participants were initially somewhat more likely than their counterparts to plan on non-university forms of full-time post-secondary education. This option became more attractive to them over time, so that by the end of the program, two fifths of them had this as a plan, whereas only one quarter of the comparison students expected to pursue non-university education. This is an indication, albeit a modest one, that the program may have had the effect of increasing the attractiveness of alternatives to a university education.

In a chapter titled *Factors inhibiting the transition of youth to work and adulthood*, King and Peart (1996:168) noted what they call the "weaknesses of the sorting mechanisms in Canadian schools." This, they feel, is in part responsible for "encouraging far more students to remain in university-based courses than will later attend university."

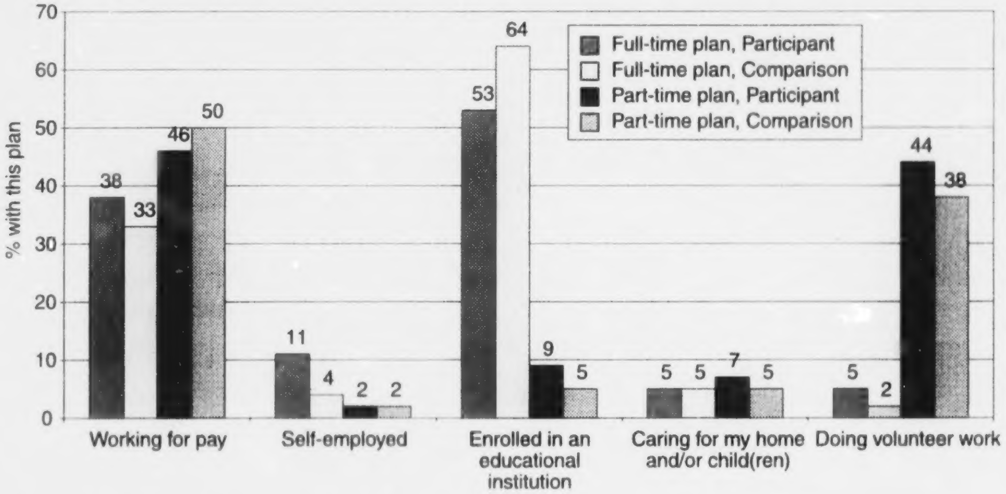
Although a strong case can be made for the value of taking university-preparatory courses even for students whose post-high school paths do not include university, the issue of developing realistic expectations is an important one. No large initial academic-performance differences between participant and comparison groups were found, yet there were some hints that the former was somewhat weaker. Some project coordinators noted that the participants seemed especially ambitious and hard working. They may have been working closer to their potential than the comparison students. If this is so, for more of them the appropriate post-high school path would not be university but rather some other type of post-secondary educational institution. The program seems to have steered them in that direction.

Regardless of which post-high school path they expected to take, between 54 and 60 percent of participant and comparison students at both the beginning of Grade 11 and the end of Grade 12 expected to get a part-time job (not shown).

Looking at their short-term plans, no striking or dramatic differences between participants and comparison students were uncovered (see Figure 4-16). Nevertheless, several small but consistent differences are of note. More participants than comparison students foresaw an earlier entry into the full-time labour market; they were still less likely to plan

Figure 4-16

Plans for three years after high school by participation status



Participant N=141; comparison N=204

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts on attending a post-secondary institution; they were more likely to consider self-employment; and they expected volunteer work to play a greater role in their lives.

Individually, none of these differences is statistically significant. Yet, collectively, they suggest greater diversity of plans among participants. It appears that the participants have considered more options and found more of them attractive than the comparison students.

Educational expectations

The analysis to this point has examined the plans the students have immediately after, and within three years of, completing high school. Regardless of these plans, how much education is ultimately expected?

The previous chapter noted the high levels of education that participants in the NSSWT program initially expected. It also showed that comparison students had even higher expectations. This section examines how educational expectations changed over the course of the final two years of high school, as well as one year later.

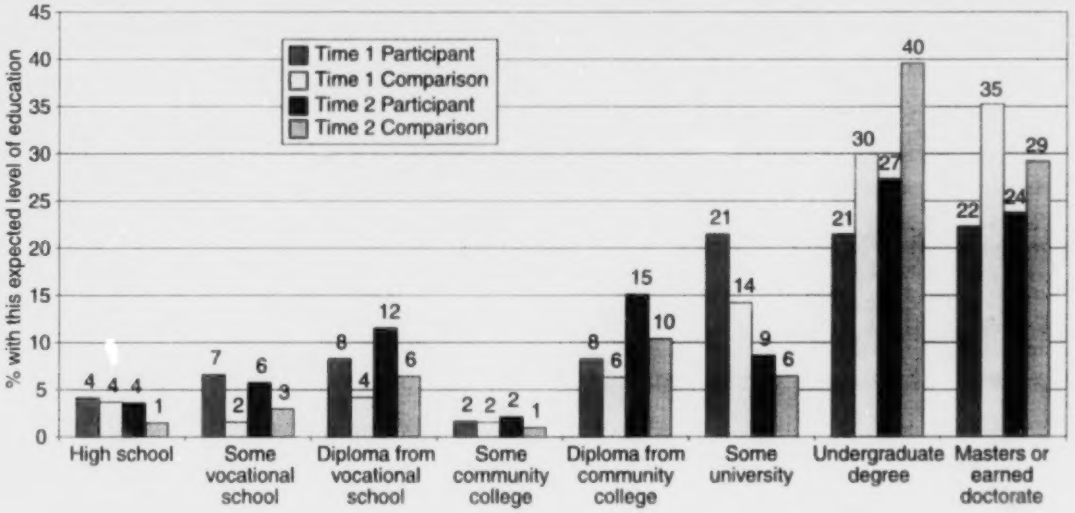
Figure 4-17 shows that participants expected to obtain less formal education than comparison students. At all educational levels below obtaining a university degree, the bars representing participants' expectations are higher than those representing the comparison group. For an undergraduate degree or a graduate degree, the reverse is true.

At first glance, this appears to be a straightforward case of levelled educational expectations. However, the differences in initial educational expectations between participants and comparison students needs to be taken into account. Specifically, 65 percent of the comparison group but only 43 percent of the participants initially expected to obtain a university degree.

One way of taking these initial differences into account is to compute change scores. Assuming that the levels of education listed in the above figure are ordinal, it is possible to compute the percentages of students whose educational expectations decreased, remained the same, or increased over time. Doing this shows that, among the participants 30 percent lowered their expectations, 43 percent remained unchanged, and 27 percent increased their expectations. Percentages for the comparison group are 28 percent, 50 percent and 22 percent, respectively. These percentages are so similar they are considered nothing more than sampling fluctuations.

Figure 4-17

Expected level of education by participation status and year



Note: The percentages add to less than 100% because the category "other" was excluded.

N=341 (participant=139; comparison=202)

Source: Initial student questionnaire (Time 1), Grade 12 student questionnaire (Time 2), 1995 and 1996 cohorts

Although closer inspection showed no significant differences in reduction in educational expectations, some important differences in the pattern of the reductions emerge. Participants changed mainly from expecting some university education to expecting to obtain a diploma from either a community college or a trade, technical, vocational or business school. By the end of the program, the number of participants expecting a diploma from a community college doubled from 10 to 20, for example. Likewise, a diploma from a trade, technical, vocational or business school became half again as popular, increasing from 10 to 15. There was no reduction in the number expecting either a Bachelor's or a Master's degree. At the beginning of the program, 25 and 27 participants expected a Bachelor's and a Master's degree, respectively. At the end, the corresponding figures were 28 and 31. There was also no increase in the number who expected to obtain less than a diploma. This suggests that the main dynamic among the participants was an increasing attraction for diverse types of educational certificates rather than a simple reduction in the attractiveness of post-secondary education.

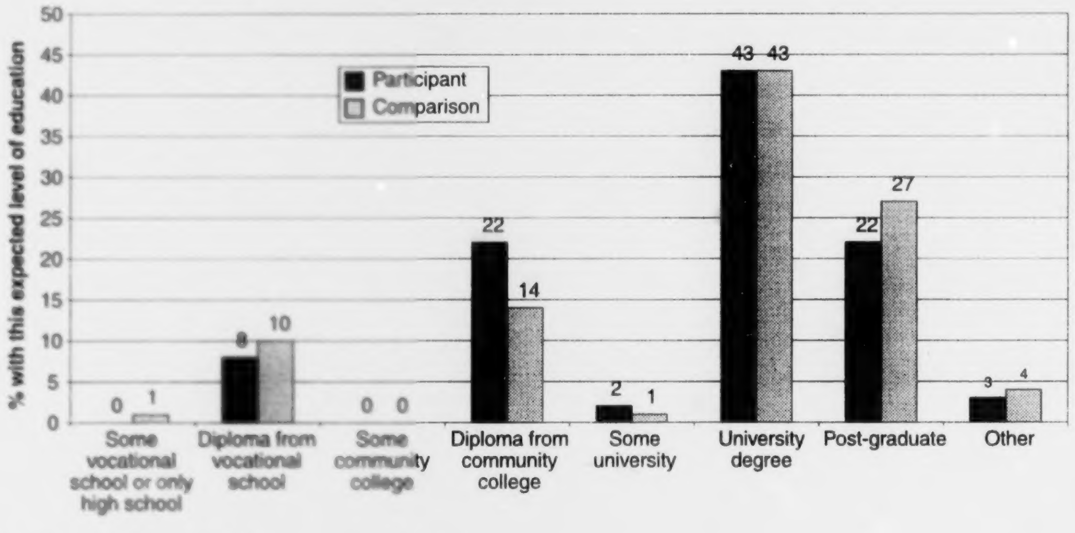
Data from the parents of participants at Time 1 and Time 2 show a similar pattern of change. By the end of Grade 12, fewer of the parents (57% as compared to 68% at Time 1) said they would prefer their child to go to university. The shift in parental preferences moved away from university-level education to community college, although university was still the preferred choice of most parents.

Among comparison students, the change involved primarily a reduction in the number who expected a post-graduate degree and a corresponding increase in the number expecting a Bachelor's degree. The number fell from 67 to 55 in the first instance; and increased from 56 to 76 in the second. The dynamic here appears to be a reduction in the amount of post-secondary education expected, without a noticeable increase in the attractiveness of different types of post-secondary institutions.

Figure 4-18 shows some interesting effects of being out of high school for a year. Although caution needs to be exercised when comparing this figure with the previous one, since the number of respondents is severely reduced, several intriguing conclusions can be drawn. First, virtually all participant and comparison students plan on

Figure 4-18

Expected level of education by participation status (1995 cohort follow-up interview)



N=169 (participant=55; comparison=114)

Source: 1995 cohort follow-up interview

getting at least a diploma. Second, both groups favour some form of certificate, whether it is a university degree, a community college diploma or a diploma from some other type of post-secondary institution. Conversely, the attractiveness of mere exposure to a post-secondary institution wanes. Note, from the previous figure for example, that about a quarter of participants initially expected to get "some university." By the time of the follow-up, this had shrunk to just 2 percent. Third, the resolve for a university degree does not diminish over time; at the time of the follow-up interview more students than at any previous point in time, in both groups, expected to get at least a university degree.

Occupational expectations

The designers of the NSSWT program recognized the importance of helping young people develop realistic job expectations. Previous research showed young people's occupational aspirations to be extremely optimistic. Their expectations were hardly less so. In particular, the occupations of choice are at a managerial and professional level. Given that the occupational structure of Canadian society cannot accommodate such a concentration in the professional and managerial ranks, it would be appropriate to provide young people with information that might make them consider other types of jobs. Krahn (1996) noted the marked reticence of young people to opt for skilled trades. Unrealistic expectations may breed discontent and ultimately impede the transition to work.

The concept of jobs with potential is an attractive one in the context of an applied program, one of whose objectives is to help young people make better occupational choices. It is tempting to equate this concept with high-prestige or high-technology jobs. This would, however, result in serious drawbacks. As discussed above, substantially more young people expect to have high-prestige professional and technical jobs than the labour market can accommodate. Although high prestige and high technology are important ingredients, the concept of jobs with potential must focus more on skilled jobs where the demand for these skills is high and the supply relatively low. More precisely, a job with potential is a skilled job where the future demand is anticipated to be higher than the current supply. A job with potential would have to be one with a high likelihood of finding employment.

Operationally, such a definition rests on economic forecasts and projections. Such projections are inherently fraught with ambiguities and uncertainties. Nevertheless, they represent a potentially viable approach to assessing whether the NSSWT program helped participants make better occupational choices. This is one, by definition, that moves participants in the direction of having a greater chance of getting a job.

As part of the Canadian Occupation Projection System (COPS) project, jobs in the Nova Scotia economy were classified into one of five categories, ranging from "very low opportunity" through "average" to "very high opportunity." The classifications were based on both quantitative and qualitative estimates of supply and demand for workers in each occupation.[17] Since an identical occupational coding scheme – the National Occupational Classification, or NOC – was used to identify both the opportunity score and the job young people expected to have, it became possible to assess the opportunity structure of participants' expectations.

Both participants and comparison students were asked what job they expected to enter after completing their formal education. They were asked this question at the start of their participation in the NSSWT project and two years later. This permits an examination of the opportunity structure of both the initial and final job expectations. Figure 4-19 shows the results.

On the positive side, both initially and ultimately, participants were substantially more likely to expect to enter high-opportunity occupations than low-opportunity occupations. For example, 36 percent of participants initially expected to enter jobs that were assessed as either high opportunity or very high opportunity; less than half that number (13%) expected jobs classified as either low or very low opportunity.

On the negative side, there is absolutely no increase over the duration of the program in the percentage choosing high- or very-high-opportunity jobs. If anything, there is a decline over time. Further, there is no evidence at all that participation had a beneficial impact. The change over time in the opportunity structure is about the same for participant and comparison students. For both there is an insignificant decline.

How are these results to be explained? One possibility is that information about the opportunity structure of the Nova Scotia labour market was not sufficiently emphasized in the NSSWT program (nor in the high schools generally). A second possibility is that youths' plans are impervious to such information. That is, youths' plans may not be made on the basis of rational calculation of future employment prospects.

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[17] See Appendix A of the 1997 Nova Scotia Labour Market Outlook (Human Resources Development Canada 1997a) for detailed methodological information.

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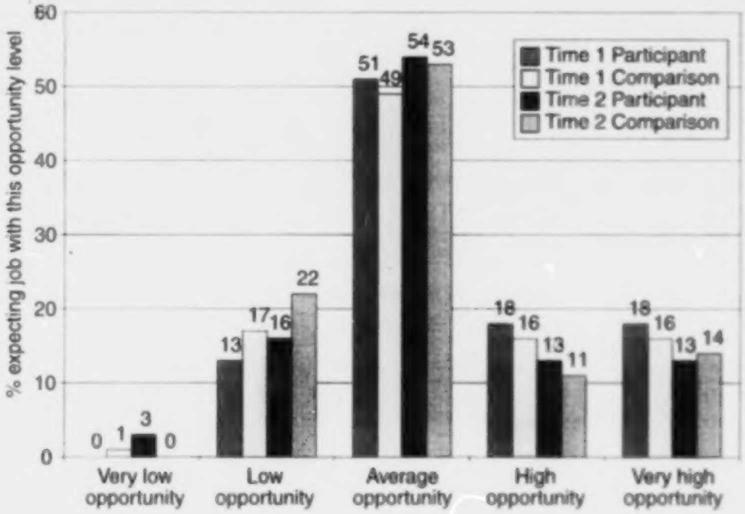
Figure 4-19

Opportunity structure of initial and final job expected



N=345 (participant=141; comparison=204)

Source: Initial student questionnaire (Time 1), Grade 12 student questionnaire (Time 2), 1995 and 1996 cohorts

In the one-year follow-up of the 1995 cohort, students were asked, "What specific job do you expect to be in 10 years from now?" The occupations were collapsed into the skill levels underlying the NOC.[18] The results, given in Figure 4-20, show that participants of the program were somewhat less likely than members of the comparison group to expect to be managers, professionals, semi-professionals or technicians, and more likely to envisage skilled sales and service and clerical occupations at semi-skilled levels. These expectations are consistent with the educational expectations reported by the students, in so far as participants were more likely to see themselves as pursuing non-university, technical and trade options that would prepare them for skilled jobs (see Figure 4-17).

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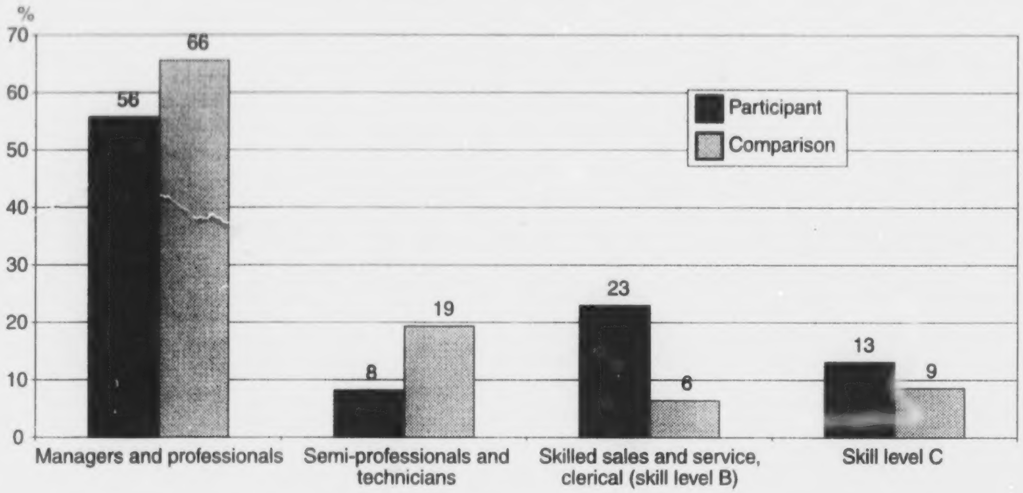
[18] Skill level B positions include senior and skilled clerical, sales and service positions and skilled crafts and trades. Skill level C includes semi-skilled clerical, sales and service, and semi-skilled crafts and trades. The lowest skill level, D, is applied to unskilled clerical, sales, service and manual workers.

Figure 4-20

Skill level and type of occupation expected in 10 years' time by participation status



Note: Semi-professionals and technicians include one supervisor. No respondents listed jobs at skill level D.

N=154 (participant=61; comparison=93)

Source: 1995 cohort follow-up interview

Making plans

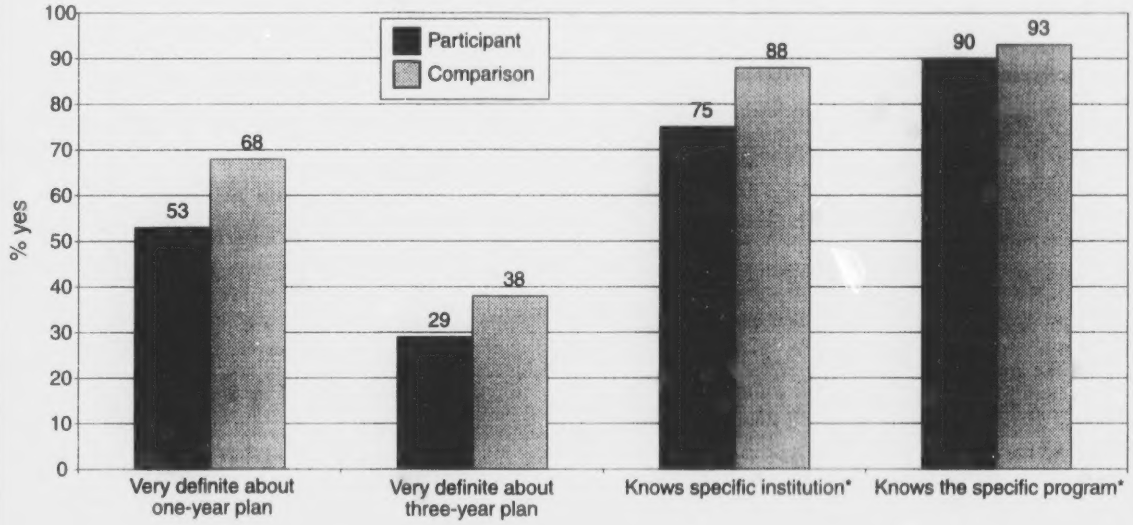
An argument can be made that school-to-work transitions are facilitated by a process of making increasingly specific plans. As plans are made more concrete, planning and preparation for implementing these plans can be put in place. One observer of the Canadian scene has suggested that uncertainty of plans is a key indicator of subsequent transition difficulties (Sharpe 1996).

It can also be argued that premature closure of plans can produce undesirable results. Comments from participants and their parents in personal interviews indicate that they frequently recognized that a plan they had held with some conviction appeared less promising as a result of their participation in the program.

Figure 4-21 shows unequivocally that participants are less certain than comparison students on each of a variety of measures of certainty of future plans. The differences are consistent and large enough to warrant the conclusion that they represent genuine differences.

Figure 4-21

Certainty of future plans by participation status



*Asked only of those planning to attend a post-secondary institution.

N=344 (participant=140; comparison=204)

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts

Work environment

Having established earlier that participants are less likely than their comparison counterparts to expect to enter managerial and professional jobs, do they also want and expect different things from their work? Do they expect different rewards from work? Does work motivate them for different reasons than it does comparison students?

Three over-arching motivations for work are examined in Table 4-14: working for material benefits, working for the challenge, and working for self-fulfilment. Working for material benefits is similar to the popular concept of extrinsic rewards (Herzberg 1974). Working for challenge and working for self-fulfilment are perhaps best conceived as subdivisions of intrinsic rewards.

Table 4-14

Attributes of work considered very important by participation status

Considers this attribute of work to be very important:	Participant %	Comparison %
Work for material benefit		
Pays well	56	57
Has good chances for promotion	49	50
Has good fringe benefits	44	41
Work for challenge		
Is challenging	37	32
Uses and develops your skills and abilities	69	74
Gives you responsibility	64	62
Work for fulfilment		
Fits your interests	82	84
Is enjoyable	84	87
Fits your personality	76	69
Gives you a feeling of accomplishment	77	79

N=342 (participant=140; comparison=202)

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts

Work motivation does not distinguish participants from comparison students. What is more striking is the similarity in overall motivation, with work for self-fulfilment receiving the highest endorsement from both groups. Working for material benefits receives such endorsement from about half the students.

One year later

The information considered so far has focused primarily on the outcomes reported by the students at the end of Grade 12. The research design provided for a one-year follow-up of the 1995 cohort of students. While few of them had made a complete transition to work, it is informative to examine the ways in which the labour market and educational experiences of the two groups of students differed during that one year, to better understand the effects of program participation.

The results (Table 4-15) show that over 90 percent of both participants and comparison students had graduated from high school and had, in their estimation, completed the requirements they needed for acceptance into the post-secondary program of their choice. Two-thirds or more had, in fact, attended a post-secondary institution (67% and 71%, respectively). Most had had at least one paid job (87% and 84%, respectively). Only a minority returned to high school for additional courses; only a minority were self-employed. While almost half of the students in both groups reported at least one period of unemployment, only a handful – in the comparison group – actually drew Employment Insurance. Important, however, is the overall similarity between the participant and comparison students; there is virtually no difference in the outcomes between the two groups.

Table 4-15

Educational and employment outcomes by participation status

	Participants %	Comparison %
Graduated from high school	97	95
Took high school courses	14	13
Completed entrance requirements for admission to post-secondary school	92	91
Attended a post-secondary institution	67	71
Had a paid job	87	84
Was self-employed	20	23
Was unemployed	44	45
Drew Employment Insurance[a]	0	4

[a] This was asked only of those who said they had been unemployed.

N=189 (participant=70; comparison=119)

Source: 1995 follow-up interview

Given the importance of these outcome measures, they warrant a closer examination. The follow-up interviews provide additional information on the educational and employment experiences of these students.

First, since it was shown earlier that more of the participants said they planned to take non-university forms of education, did these plans translate into reality?

Figure 4-22 shows that this difference in educational plans is, in fact, reflected in the post-high school paths of the students. Many more of the comparison group (78% versus 52% of the participants) have attended university. More participants opted for community college.

There the difference ends. Figure 4-23 shows that the majority of both participants and comparison students (67% each) combined some form of education and paid work. One in five (or less) of both groups moved directly into the labour force, and did not pursue further schooling.[19] Essentially no one dropped out of both school and work.

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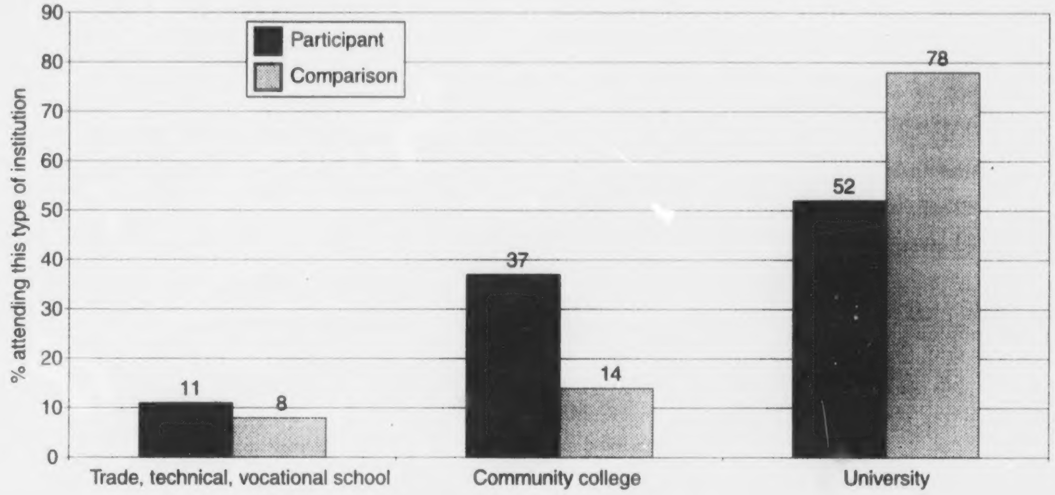
[19] The positive labour force payoff for continued education is already apparent in the first year out of high school. Among those who were continuing their education, only 41 percent had jobs at the lowest skill level (level D), compared to 53 percent in such jobs who did not pursue further schooling.

Figure 4-22

Type of post-secondary institution attended by participation status

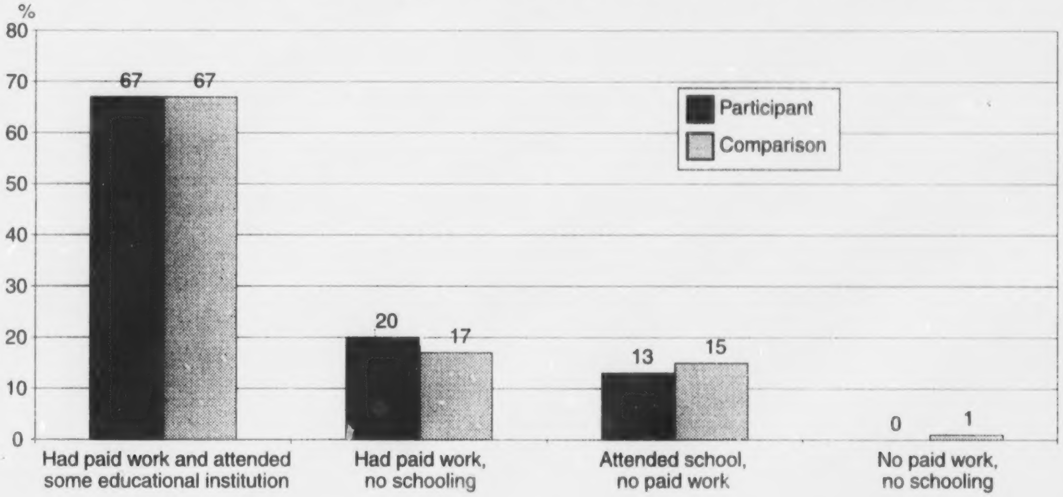


N=131 (participant=46; comparison=85)

Source: 1995 follow-up interview

Figure 4-23

Patterns of schooling and work by participation status



N=189 (participant=70; comparison=119)

Source: 1995 follow-up interview

Overall, students had an average of 1.6 jobs since they completed Grade 12 (1.7 for participants; 1.6 for comparison students). There was no difference in the rate of pay obtained by participants ($6.18 per hour) compared to other students ($6.28). Nor was there any difference in the percentage experiencing unemployment (as shown in Table 4-15), or in the number of times students were unemployed. Thirty-six percent of participants and 34 percent of the comparison group had only one period of unemployment; 7 percent and 8 percent of students, respectively, had two such periods.[20] The elapsed time since high school is too short a period, and too few respondents were exclusively in the labour force, to allow meaningful assessment of the ongoing effects of program participation on labour force outcomes.

Work was important to both participants and comparison students during the year after high school. Overall, more than 80 percent of both the participant and comparison groups had at least one paid job during this time. Often this was summer work, and/or part-time work undertaken while attending school. In fact, only 2 to 3 percent had *only* a summer job; 5 percent of participants and 7 percent of comparison students had jobs only during the 1997-98 school year. Almost all (98%) of the respondents who were employed had jobs during the school year; almost all (93% of the participants, 90% of the comparison group) had these jobs both during the summer and the school year. More than 60 percent of students had at least one full-time job (i.e. more than 30 hours a week) and this usually occurred during the summer. Indeed, only a minority of participants, as well as comparison students (38% and 30%, respectively), worked only part time. In none of these comparisons is there any reason to believe that program participation made a difference.

This section has documented that, based on interview data from the 1995 cohort, the activities and attainments of the NSSWT participants cannot be differentiated from those in the comparison group. They had similar work experiences, similar types of jobs, with similar rates of pay and similar experiences with unemployment. Only their post-secondary paths differed. Consistent with their earlier plans, more of the participants attended community college, while more of those in the comparison group attended university.

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[20] While there is some suggestion that participants had slightly longer periods of unemployment than comparison students, it is futile to try to make sense of the patterns, since most students in both groups were pursuing further education.

Gendered outcomes

Chapter 3 discussed some gender differences at the start of the program that could affect program outcomes. It was clear at that point that more young women than men were attracted to the program. They might have been attracted for different reasons. Further, a number of gender differences in both educational and occupational plans and expectations existed right from the start. These young women and men also differed in terms of the skills they felt they were bringing to the NSSWT program.

This section examines the ways in which gender influenced outcomes. It may be that the type of program that meets the needs of young men is less successful for young women, or vice versa.

Table 4-16

Perceptions of NSSWT program by gender

	Males	Females
Percentage who said *very much*:	%	%
Gave you good work experience	83	81
Helped you use & develop your skills	76	60
Helped decide on post-high school plans	50	46
Improved chances of a better-paying job	60	31
Improved chances of a more interesting job	48	36
Improved chances of acceptance into post-secondary	44	30
Helped you explore career options	67	62
Helped you develop more realistic job plans	63	51
Improved your knowledge of the job market	44	51
Improved your job search skills	33	43
Provided contact with potential employers	50	48
Influenced your choice of post-secondary field of study	42	39

N=135 (males=42; females=93)

Source: Grade 12 student questionnaire, 1995 and 1996 cohorts

At the beginning of Grade 11, young women tended to have lower self-concepts than young men. Can the same be said at the end of Grade 12? Did the NSSWT program affect males differently than females?

The only large – and statistically significant – difference is that more of the young men (60% versus 31% of the young women) felt that participation in the program improved their chances of getting a better-paying job (Table 4-16). Since pay was more important for the young men in Grade 11, this finding reinforces the idea that young men have different expectations of the program. Additionally, there is some indication that young women were less likely than their male counterparts to state the program benefited them "very much." However, the differences are quite small, and on the whole, women and men list similar types of benefits from the program.

At the start of the program, young men expressed greater concern with the extrinsic benefits of work, whereas young women seemed more interested in self-fulfilment and challenge. At the end of Grade 12, are there still gender differences in the job characteristics these students defined as important?

Table 4-17

Attributes of work considered very important by gender

Considers this attribute of work to be very important:	**Males** %	**Females** %
Work for material benefit		
Pays well	64	53
Has good chances for promotion	52	49
Has good fringe benefits	42	43
Work for challenge		
Is challenging	32	35
Uses and develops your skills and abilities	63	76
Gives you responsibility	55	66
Work for fulfilment		
Fits your interests	76	86
Is enjoyable	77	89
Fits your personality	64	75
Gives you a feeling of accomplishment	66	84

N=342 (males=106; females=236)

Source: Grade 12 student questionnaire

Table 4-17 shows that two years later differences persist with respect to what women and men see as important in jobs with potential that they hope to attain. Women emphasize the more intrinsic characteristics, such as being enjoyable, giving a feeling of accomplishment and fitting their personality. These attributes, while important to young men, are not as high a priority.

The Grade 12 data confirm that young women also continue to place more emphasis on their job being clean, safe and secure – issues that seem to concern fewer young men.

On the one hand, the fact that women were as likely as men to endorse the work experience they received in the program suggests that the project coordinators were able to match job placements to their different priorities. On the other hand, the persistence of these gender differences presents a challenge to those planning and offering school-to-work transition programs. If the students face not only a labour market segregated by gender, but also bring different expectations and inclinations to that market, adequately preparing them for the transition becomes all that more complicated.

In terms of the actual jobs that they expected to get, more of the women listed professional positions; more of men saw themselves in skilled crafts and trades (not shown). In line with expectations, more of the males listed "trade, technical, vocational school" as the highest level of education they expected to obtain. Few women saw this as the route they expected to follow. They, like many of the men, expected to get a university degree.

A separate question asked the youth what skills they thought they had to offer as they left high school (Table 4-18).

There are some interesting patterns in this table. In some things, such as problem solving, women rated themselves lower than men. In others, such as planning and organization, more women than men rated themselves highly.[21]

Table 4-18

Self-rating on skills, by gender

	Males	Females
Percentage rated themselves as "high":	%	%
Reading written materials	37	30
Numeracy	37	29
Writing	31	41
Planning and organization	23	43
Problem-solving skills	31	18
Oral communication – interaction with others	39	45
Oral communication – giving information to someone	31	35
Ability to work in a team	59	64

N=345 (males=108; females=237)

Source: Grade 12 student questionnaire

The 1995 cohort follow-up interview permits a more detailed examination of gender effects on student outcomes. While young women and men were similar in many ways, some important differences are noteworthy.

First, given the gender difference in academic performance discussed previously, it is not surprising that virtually all young women reported having graduated from high school (99%), whereas fewer than 9 in 10 (88%) young men did so (Figure 4-24).

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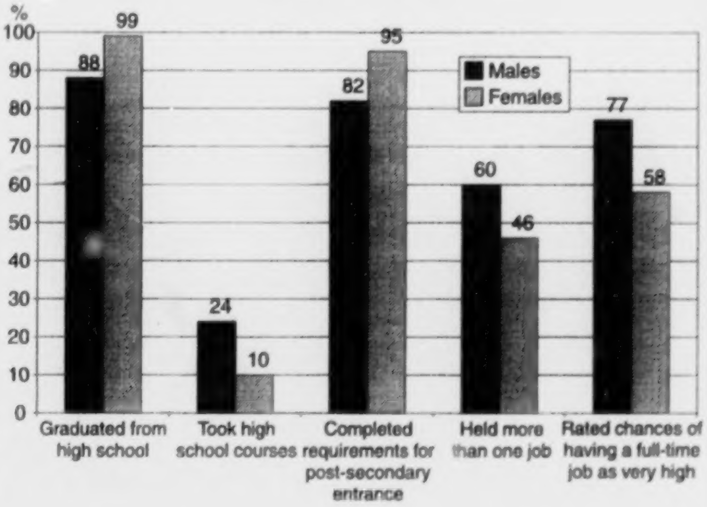
[21] What is even more interesting is that the gender difference in self-rating on planning and organization is much larger in the comparison group than among participants. The case base is too small to provide a definitive answer, but it suggests that one of the possible benefits of the NSSWT program was to increase the planning and organizational skills of young men.

Figure 4-24

Gender differences one year after high school



Source: Follow-up interview, 1995 cohort

Similarly, only 1 in 20 young women reported not having completed the requirements for entrance into post-secondary institutions, compared to almost 1 in 5 (18%) young men. Additionally, given this pattern, it is not surprising that almost a quarter (24%) of the young men, but only 1 in 10 of the young women, returned to high school the year after Grade 12. It is also evident that these young men were returning primarily to meet the criteria for a high school completion certificate. Few of the young women who returned did so for this reason.

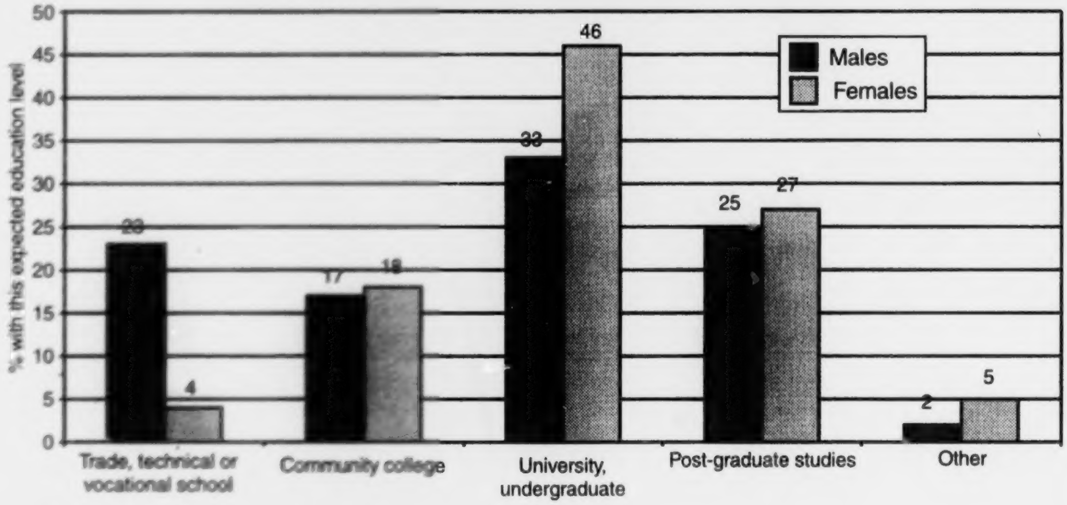
In line with the greater emphasis on paid work among men documented earlier, males were both more likely than females to have held more than one job and to rate their chances of obtaining full-time jobs in the future as very high.

Finally, consistent with their earlier expectations, more young women than young men expected to get a university degree one year after high school (Figure 4-25). Young men are more likely to see trade, technical or vocational school as a viable option.

This difference in educational expectations one year after high school may well create gender differences in occupational plans. Additional analyses (not shown) revealed that one year out of high school, more women than men expected to be in professional careers in 10 years' time (55% and 48%, respectively). Young men, on the other hand, considered skilled crafts and trades a more viable occupational option; 19 percent of the young men, but none of the young women, expected such jobs in 10 years' time.

Figure 4-25

Highest expected education by gender



Source: Follow-up interview, 1995 cohort

Male and female respondents were similar in terms of their perceptions of, and their feelings about, the NSSWT program. The only difference is that more young women said the program helped them decide what to do after high school. Two thirds (67%) of the women, compared to 52 percent of the men, said the program helped them in this way.

What can be concluded from this brief overview of the key gender differences? It is clear that gender distinguishes young women and men's expectations and experiences in high school and many of these differences persist beyond high school. Young women and men are looking for somewhat different types of jobs, are planning on different types of education, and bring different self-images to bear on the school-to-work transition process. It would be impossible, from both a practical and a political point of view, to design different transition programs for males and females. However, programs that ignore these differences run the risk of serving the needs of neither group.

Student objectives in review: successes and failures

This chapter provided empirical evidence necessary to assess the extent to which student objectives were met. Although the different objectives overlap to some extent, each one will be addressed here in turn.

Objective 1: To provide participants an opportunity to complete a Nova Scotia high school completion certificate that qualifies them for entrance into post-secondary institutions.

Participation in the NSSWT program modestly improved the likelihood of completing high school graduation requirements. This conclusion is based partly on the fact that 78 percent of participants, but only 70 percent of comparison students completed such requirements. Interviews with strategic participants near the end of the program uncovered several powerful testimonials from participants who stated they would have dropped out of school had it not been for the program.

Attrition from the program complicates the analysis somewhat, since completion of high school graduation requirements is also strongly related to time of withdrawal from the program. For example, only 55 percent of early leavers completed all high school graduation requirements. This figure increases dramatically to 86 percent of those who withdrew during the second year of the program. Early leavers were least likely to complete high school graduation requirements; NSSWT graduates and those who left during the second year of the program were most likely to satisfy all graduation requirements; and those who left the program in the summer between the first and second year were indistinguishable from the comparison group. The fact that those who almost completed the program, as well as those who actually completed the program, were most likely to satisfy graduation requirements supports the conclusion that the NSSWT program modestly accomplished its first objective. Limited formal education is reckoned to be the single greatest obstacle to labour market success, and since high school completion is the prerequisite to most forms of further education, the success of the program in this respect is an important one.

Not all implementations were equally successful in this respect. In two sites (Amherst and Yarmouth), NSSWT graduates were actually somewhat less likely than the comparison group to meet graduation requirements. It is not possible with the available data to pinpoint the reason for these site differences.

Objective 2: To facilitate the transition from school to work or post-secondary institutions for high school graduates.
In one sense, the objective to facilitate high school students' transition from school to work or to post-secondary institutions encompasses all other student objectives. Each of the other objectives, such as successfully completing high school, is a specific mechanism that facilitates the transition out of high school and into work or further education. However, this objective can also be thought of in a narrower sense, referring to experiences participants had upon completing Grade 12. Were they able to act on the plans they had formulated in high school? This would include such things as being accepted into the institution of their choice for those who planned to pursue further education. For those who opted to enter the labour market on a full-time basis, were the labour market outcomes desirable ones? Did they experience less unemployment than comparison students? Were they able to find appropriate work or start a business in a relatively short period of time? Did they have higher earnings?

The elapsed time since the end of the NSSWT program is too short to provide a definitive answer to these questions. For the first cohort, one year had elapsed between the end of the program and the follow-up interview; no follow-up was even possible for the second cohort. The analysis of the follow-up telephone interviews showed mixed results which makes a definitive conclusion difficult if not impossible. What can be said is that no evidence for short-term effects emerged.

Objective 3: To assist high school students to develop generic and specific skills leading to jobs with potential.
Two sets of objective skill indicators (International Adult Literacy Survey and the American College Testing WorkKeys) were built into the design of the NSSWT program to measure the development of transferable skills that are thought to be essential in jobs with potential. The findings support two conclusions. First, both groups showed improved levels of skills from Grade 10 to Grade 12. Second, skill acquisition among participants is similar to that of comparison students. They show neither accelerated nor reduced rates of skill acquisition.

It is tempting to attribute the lack of any difference to methodological shortcomings. It is likely, for instance, that the calibration of the WorkKeys tests is insufficient to capture small changes. Nevertheless, the fact that most of the tests were able to capture improvements over time, but unable to detect any substantive or meaningful difference between program participants and comparison students, argues against methodological problems. The better conclusion may be that the NSSWT program did not impart any competitive advantage to participants with respect to acquiring generic skills.

At the same time, the program did appear to improve participants' ratings of their skills. At the start of the program, participants rated their skills consistently lower than did the comparison groups. By the end of the program, some of these differences had diminished. Indeed, with respect to problem-solving skills, participants showed significantly greater improvements than did the comparison group.

Objective 4: To assist high school students to make better educational and employment choices.

The evaluation of this objective is complex and multifaceted. In part, this is because there are few universal criteria. What is undeniably a better choice for one student may represent an inferior choice for another. The fit between a student's interests and abilities, the educational programs that would capitalize on these abilities, and the job requirements and opportunities in the student's chosen occupation constitutes the basis for determining whether one decision is better than another. Such an analysis is beyond the limits of the data at hand. However, a number of issues were explored that are relevant to identifying in what ways this objective has been met.

Universities are the favoured post-secondary institutions of Canadians. Many more young people initially plan to attend university than subsequently enrol. For some of these young people, financial considerations could underlie the decision not to pursue a university education immediately after high school. For others, their high school academic performance may not meet university-admission requirements. Such students may be best served if they were advised to explore other post-secondary paths. Their educational expectations may be somewhat unrealistic. Did the NSSWT program help level such students' expectations? The answer appears to be yes, although the number of cases is too small for a definitive answer. Almost a quarter (22%) of participants whose academic performance was not strong enough to qualify them for admission to university, but who originally planned to attend university immediately after high school, changed their minds. This contrasts with only 7 percent among the comparison group. Participants therefore were three times as likely as comparison students to make more appropriate post-high school plans when their academic performance suggested attending university might not be a realistic option.

It is important to note that these results do not represent just a general levelling of post-high school educational expectations among participants, since a comparable levelling among participants who qualify for university admission does not occur. Among those who qualified for university admission, and who originally planned to attend university, only a handful opted for a non-university post-high school path by the end of Grade 12 (4% among participants and 3% among comparison students). The NSSWT program clearly did not dampen plans of those whose academic performance made university a realistic choice, while at the same time it encouraged an exploration of alternative paths among those participants whose academic performance indicated that university was not a likely option.

Nor does the levelling that occurs extend to weakening the commitment to post-secondary education. Policy makers and scholars of the changing requirements of work recognize that a high school completion certificate is no longer sufficient for employment in a job with potential. Hence, anything that fosters high school students' resolve to pursue their education beyond high school is a step toward them making a better decision. In this respect, students attracted to the NSSWT program are already converted, since almost all of them (more than 95%) expected to pursue some form of post-secondary education. Participation in the program reduced unrealistic academic plans but did not appear to reduce commitment to obtaining a post-secondary education.

Levelling of academic expectations occurred among all students, both participant and comparison. The crucial difference is that participants increasingly found alternatives to a university education attractive. In contrast, the levelling that occurred in the comparison group consisted primarily in reducing the amount of university education. This group was less likely by the end of Grade 12 to expect to obtain a Master's or doctorate degree. As already indicated, among comparison students whose academic performance would not qualify them for admission into university, there was no evidence that alternative forms of post-secondary education were being contemplated.

The changes that were documented with respect to educational decision making suggests that the NSSWT program was instrumental in channelling participants into paths that were appropriate for them. The program helped them fulfil their high school graduation requirements, maintained their commitment to pursuing post-secondary education and stimulated them to consider programs other than those traditionally offered by universities.

The evidence with respect to their occupational decision making is less decisive. Most young people entered the program with some idea of the type of work they expected to do in their future. For some, these expectations were based on cherished hopes from which they would not be easily swayed. For others, the choice was a tentative stab in the dark, based on very little information about either job prospects or job requirements. It is among such participants that one might hope for signs of improved decision making.

Possible evidence for better occupational decisions would be present if participants were to choose jobs with brighter prognoses. As documented in this chapter, although many participants changed their minds about their expected work, there was no indication that the prospects for their newly chosen work were better than for their previous one. That is, the Nova Scotia labour market opportunity structure was, on average, about the same for their originally expected job as it was for their ultimately expected one.

On the whole then, there is no evidence that the occupational expectations after taking part in the NSSWT program were more suited to local labour market conditions than they were prior to students taking part. Likewise, no evidence was found that the ultimate occupational expectations of participants were more suitable to the local labour market than were those of comparison students.

The expected local labour market opportunity structure is an important criterion for assessing the merit of individual occupational choices. But it remains only one of many criteria. Potential for self-fulfilment, harnessing of personal talents and the furthering of personal values or ideals constitute additional relevant criteria. The problem with these is that they are difficult to capture with statistical data, often emerging only in intensive personal interviews. Indeed, the strategic interviews gave ample testimony to the powerful effects that the program had on the occupational decision making of participants. A few individual examples are warranted.'

Greg is an excellent example[22]; he is a student who wanted to be a teacher until he did his work placement. He found he grew bored with teaching and said he asked himself, "If I was getting bored how can I work all year long as a teacher?" His supervisor at his second work placement, in a fitness centre, helped him explore new options, resulting in his making concrete plans to obtain a university degree in business administration.

Like Greg, the NSSWT program helped Carol see more clearly what it was that she did not want to do. Her first work placement, which she did not like at all, showed her that. The second work placement helped confirm for her what she did want to do, namely work with children. The program succeeded in helping Carol to see what she wanted to do and plan for her future. The project coordinator agreed that the early childhood program at the community college was a good choice for Carol. It would draw on Carol's child-caring abilities and interests and yet not be too academically strenuous. Carol's dream is to some day start her own day-care centre.

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[22] Pseudonyms are used throughout.

Both the in-school and the work experience component served Dean very well. The work placement confirmed both his interests and his aptitudes. The in-school component helped him develop his interpersonal skills, which are essential to the type of entrepreneurial activity he envisages in his future.

We assume that a narrowing of options and a crystallization of plans is evidence of success in the NSSWT program. With such a definition, we would have to conclude that the program failed Daniel, since he became increasingly uncertain of his post-high school plans and increased rather than decreased the number of options he was considering. At the beginning of the program, Daniel was quite sure he would not get any formal education beyond high school and that he would be working full time at some unspecified kind of a job while playing in a band on a part-time basis with the ultimate goal of becoming a full-time musician. At the end of his first year in the program, Daniel indicated he had "no idea" about what specific job he expected to go into. By the end of the program, Daniel was also looking at a possible career in videography and journalism, in addition to music. In the first year, Daniel was placed with a computer programming company and he expressed a great amount of interest in that field. In the second year, Daniel was placed in a community television station, the first work placement which he really enjoyed. There was variety and a chance to use digitized editing equipment, which he particularly liked. A job in this field would require some training beyond high school, and he was initially disinclined to take such training but by the end of the year his responses indicated that he was considering a shift in his plans for the future. This too represents a fairly significant impact of the program, since his future would not be very secure without some further education. Daniel still has a long way to go with respect to thinking and making decisions about his future. He already knew in Grade 11 that he would return to high school "to get some extra credits." When asked about this plan, he said he needed to do this because he had failed his Grade 10 math. He knows his new interest in videography will require him to obtain some post-secondary education, but he has little knowledge about where he can pursue this interest.

There is some evidence that the NSSWT program assisted at least some of the participating students in their post-high school educational decisions. This took the form of reinforcing a wider range of post-secondary courses as viable options for the students. Participating students, especially those who did not have the credentials to allow admission to university, were able to choose more realistic paths.

Less obvious was any program effect on the occupational expectations and plans of the students. While some clarified what they did (or did not) want to pursue, others became less clear in their occupational plans. This could be considered a negative outcome of the program if participants were planning to enter the labour force directly after high school. Instead, almost all participants are planning to continue their education so unclear occupational expectations may not be of immediate consequence.

Objective 5: To link workplace realities with more appropriate education and training for high school students.

For high school education and training to be more appropriate to workplace realities, it has to prepare students to perform well in such settings. Several features of the in-school component contributed to a better link with workplace realities. First, a hands-on approach was favoured in most sites over the traditional book learning. Likewise, the lecture-style format was de-emphasized and replaced by a more interactive approach. Both of these should help students function better in most workplace settings.

In the first year of the program, feedback from the case studies indicated that greater opportunities for reflective learning would be desirable. Such opportunities were increased in subsequent years. One of the purposes of reflective learning is to review incidences and situations that occurred to assess what can be learned as a way of dealing with similar situations in the future. Building in time for reflective learning provided opportunities to learn more from experience. This is an essential preparation for functioning with workplace realities.

Finally, participants created a portfolio of their work in the NSSWT program. The specific components of the portfolio differed in the various sites. They all, however, documented in one form or another the abilities and accomplishments of the participants, whether that took the form of a computerized job search, the development of an occupational profile or an employer evaluation of their work habits. Such portfolios served to make the participants more aware of, and realistic about, their own abilities as well as providing evidence to others of the same.

Objective 6: To provide students, while they are still in high school, with the opportunity to gain realistic expectations about their future jobs and appropriate skills training in a "job with potential."

The NSSWT program was structured to provide at least 140 hours of supervised work experience in each of the final two years of high school. The project coordinators attempted to maximize the fit between the interests of participants and job placements. Of course, participants must have decided, at least tentatively, on a future occupation before project coordinators could even attempt to find an appropriate placement. Prior to their first placement, 33 percent of participants had no idea what they expected for a future job.

An analysis of job placements in the final year of the NSSWT program showed that almost three quarters (74%) of participants who expressed future job expectations were placed in jobs congruent with those expectations. It is reasonable to assume that the NSSWT program provided these participants a solid opportunity to gain more realistic expectations about their future jobs.

Project coordinators were also able to find placements that required somewhat greater skill levels than the kinds of jobs that such students typically are able to find on their own.

With respect to appropriate skills training, the question is whether participants were given tasks that enhance skills. One way of answering that question is to look at how the participants responded to work placements. This chapter provided evidence that participants on the whole found their work placements a very positive aspect of the program. For example, about half "very much liked" the tasks they were given by their employers; 56 percent felt the same way about the specific task-related skills they developed; and about three in every five gave this response with respect to the general skills they developed. Clearly, from the participants' perspective, the program successfully accomplished the final student objective. On the other hand, from the point of view of standard skills tests such as the IALS, the work experience did not provide the participants with a greater stock of measurable skills.

Conclusion

The student outcomes yield a mixed message. The program seems to have met its objectives for some of the participating students. The participants who stayed with the program for the full two years were very clear that they felt the program had achieved what they expected and more.

The counterbalance to these positive assessments is the fact that, in terms of measurable outcomes, few differences at the end of the program favoured participants over the comparison group. The results do not provide unqualified support for the development or continuation of such a program in Nova Scotia. However, neither do they argue definitively against its usefulness. The analysis does provide some guidelines about what one can (and cannot) reasonably expect from a school-to-work program at the high school level, and what form that program would ideally take.

An overview of those "lessons learned" forms the basis for Chapter 6, but first there is information from two other sets of stakeholders that will be examined: employers and supervisors of participants, and educators in their schools.

5 EMPLOYER AND SCHOOL OUTCOMES

The students and the project coordinators were the people most involved in the NSSWT program. However, other stakeholders were integral to the program. These are: (a) the employers and supervisors who provided the opportunity for the work experience component of the program, and (b) other educators in the students' schools. This chapter first outlines the experiences of those who provided work placements, and details how those experiences might inform the lessons learned from the last three years. The impact of the program on other educators, particularly in terms of meeting the objective of creating partnerships between school and community, is also discussed.

A summary, comparing these outcomes to the program objectives, is presented at the end of the chapter.

Employers and supervisors

The program design (Eaton and Boyer 1995) anticipates four outcomes for employers. These are having employers help students develop generic and specific skills; involvement of employers in education and training (including the design of the in-school and work experience components of the program); skills training in a learning environment; and better partnership with schools and other key partners.

The skills developed by the participating students were discussed in the previous chapter and will be part of the overview at the end of this chapter. The extent to which employers were involved in the program design, through their participation in local management committees, is discussed in the current chapter. The extent to which better partnerships with schools were realized is also addressed in this section. School/business partnerships are, of course, directly relevant to the issue of the sustainability of the NSSWT program.

Employers' questionnaires

There were three sources of information about employers' perceptions of the NSSWT program and the students who undertook work placements:[1]

(1) Organizations who took a student for a work placement were asked to complete an "employer questionnaire" at or near the beginning of the first work placement. Since the questions focused on their expectations for the program, if their organization took a second student, or kept the same student for a second work placement, they were not given a second questionnaire.

(2) At or near the end of the student's work placement, that student's direct supervisor was asked to complete a "supervisor questionnaire" for each student.

(3) Supervisors were also asked to complete an evaluation form rating the student's performance during the work placement. Unfortunately, this third source of information is available only for the second placements of the 1996 cohort.

Types of organizations

The first step is to identify the kinds of employers who agreed to participate in the NSSWT program. Project coordinators for the different sites invested considerable energy finding appropriate work placements. In some areas they were constrained by high unemployment rates and a sluggish economy. Nevertheless, they were able to involve employers from a number of different types of enterprises.

These employers represented a wide range of businesses, from government (33%), retail (22%), service (17%), agriculture (6%) and other businesses such as utilities, wholesale merchandising, real estate and insurance companies (not shown). A third of the businesses were established prior to 1970 (with some dating back to the 1800s), another third between 1972 and 1986, and the remaining since then. The specific firms were almost equally split between those who were part of a larger business or organization with additional locations elsewhere (49%) and those who had just the one firm (51%).

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[1] This analysis is based on responses from 206 employer questionnaires, 57 evaluation forms and 283 supervisor questionnaires. These represent information on the work placements of 213 students. (For 80 percent of these students, data are available from both an employer and a supervisor; for 10 percent, information is available from the employer only; for the remaining 10 percent, information is available from the supervisor only.)

As Table 5-1 shows, the organizations from which these employers were drawn vary considerably in size. Some had no full-time employees; others had as many as 3000. The mean gives the arithmetic "average size," but it can be deceptive when there are a few very large units, as is the case here. The median gives the 50th percentile – half are above and half below that size. This measure clearly indicates the "typical" scenario. Half the organizations had fewer than 11 full-time employees; half had fewer than 2 on their part-time staff. The mode (the value that occurs most often) shows that the organizations were usually small, with very few full-time or part-time employees.

Table 5-1

Number of full-time and part-time employees aged 15 to 24

	Full-time employees	Part-time employees	15-24 year-olds full-time	15-24 year-olds part-time
Range	0-3000	0-200	0-83	0-300
Mean	47	9	4	5
Median	11	2	1	1
Mode	2	1	0	0

N=189

Source: Employer questionnaire, 1995 and 1996 cohorts

Many of the employees in these organizations were outside the 15 to 24 age range. This "youth cohort" accounted for only a small percentage (less than a quarter) of the full-time work force for these employers. More youth (including those from the NSSWT program) were working in part-time positions.

Employers were asked the age category of most employees they had hired over the last two years, to get a feel for whether this was an organization that primarily hired youth or older workers.

Table 5-2 shows that, most typically, recent hirings in these organizations were from the over-24 age group: about 4 in 10 employers (42%) reported this pattern. However, 30 percent reported a fairly even mix of age groups, and 20 percent had hired primarily younger workers. These responses indicate there were jobs in these organizations for younger workers, although many of these positions may be part-time or seasonal in nature.

Table 5-2

Age of employees hired in the last two years

	%
Most are over 24 years of age	42
A fairly even mix	30
Most are 24 years of age or under	20
Other/Do not know	9

N=200

Source: Employer questionnaire, 1995 and 1996 cohorts

This brief overview of the employers indicates that a considerable variety of employers became involved in the NSSWT program. Their organizations covered a wide range of public and private sector enterprises. Some were very large, multi-site organizations, while others were small, local firms. The diversity evident in the types of companies suggests that almost any type of employer could provide the link to work experience for NSSWT students and those in similar programs.

Employers' perceptions of the NSSWT program

Employers were asked how they first heard about the NSSWT program, and why they decided to participate. Table 5-3 gives details about how employers heard of the program. The employers who took on students from the 1995 cohort for a work placement were asked to list all the sources they used. Those who did not take on a student until 1996 were asked the first source of this information.

The results presented in Table 5-3 indicate that the project coordinators played a key role in recruiting employers for the different work placements. This pattern emerges, regardless of the wording of the question. Almost two thirds (64%) of the 1996 employers first heard about the program through the coordinator. In 1995, more list the coordinator than any other source.[2] Others heard about the program from a teacher, a school counsellor or a co-worker. Few (less than 3%) found out about the program from either the local newspaper or from a school announcement or poster. It seems that direct recruitment procedures followed by project coordinators was most effective.

The most common reason employers gave for participating in the program was that they "agreed with the program's philosophy" (Table 5-4). Fully 82 percent mentioned this as one of many reasons they had for participating. Just under half (45%) listed it as the most important reason for their participation.

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[2] Slightly fewer employers involved in the Grade 12, as compared to the Grade 11, work placements heard about the program first from the project coordinator.

Table 5-3

How employers first heard about th NSSWT program

	Heard about it from this source 1995* %	Heard first from this source 1996 %
Project coordinator	72	64
Teacher	15	11
Co-worker	2	7
School counsellor	14	6
Chamber of Commerce	5	3
Advertisements in local paper	2	2
School announcement or poster	1	1
Other	12	6

* Percentages add to more than 100% because multiple sources could be checked.

1995 cohort N=103; 1996 cohort N=99

Source: Employer questionnaire, 1995 and 1996 cohorts

While Table 5-3 shows that the project coordinator was crucial in terms of providing information about the program, the results suggest that, once they were made aware of the possibilities, these employers needed little convincing. They saw themselves as supporting the program's objectives, and wanting to encourage innovation. They were less likely to emphasize benefits to their organization (such as improving public relations or gaining access to young workers), although they were not unaware of these benefits.

Many of those who listed "other" reasons as most important mentioned wanting to help the students (not shown). They made comments like "Wanted to help prepare students for the work environment" or "Wanted to give back to the community." This sense of community spirit was identified by the project coordinators several times during group meetings. It is a spirit that successful school-to-work transition programs can draw on, and to which they can contribute.

Besides their attitudes and expectations regarding the NSSWT program, employers were asked to describe their attitudes regarding the role schools and businesses can play in educating and training youth. Table 5-5 presents their responses.

As Table 5-5 shows, just under half (44%) of employers strongly agreed that business-school partnerships are important to develop and maintain. This position is consistent

Table 5-4

Reasons and main reason for employer participation in the NSSWT program

	Reasons for participating*	Main reason for participating
	%	%
Agreed with the program's philosophy	82	45
Wanted to encourage innovation	41	10
Thought it would be good public relations	36	2
Wanted access to young employees	26	5
Wanted closer ties with the school	23	3
Was persuaded by the coordinator	19	4
Other reason for participation	16	31

* Employers could choose more than one reason.

Reasons for participating N=203; main reason N=164

Source: Employer questionnaire, 1995 and 1996 cohorts

Table 5-5

Employers' attitudes

	Strongly agree
	%
Business-school partnerships are important to develop and maintain	44
Work experience issues should be incorporated across the curriculum	35
Employers need to be more actively involved in schools	32
A major role of schools is to prepare youth for the labour market	26
Training for specific tasks should be provided by employers	23
Business should commit resources to improving links with schools	17
Schools should emphasize employment-relevant skills over more general knowledge	16
Schools should emphasize general knowledge over employment-relevant skills	10
It is best to keep a clear division between the roles of school and business	9
It is unwise to link the school curriculum too closely to the local job market	6
Local businesses should have a direct voice in setting school curriculum	3
School "work experience" programs should target those with lower academic standing	3

N=203

Source: Employer questionnaire, 1995 and 1996 cohorts with their emphasis on "agreement with the program's philosophy" as a major reason for their participation (as presented in Table 5-4). Many of them also strongly agreed with similar statements: work experience issues should be incorporated across the curriculum (35%); employers need to be more actively involved in schools (32%); and a major role of schools is to prepare youth for the labour market (26%).

Employers were less likely to endorse specific roles or statements about what the division of labour should be between schools and businesses with respect to general education and job-relevant training. For example, while 23 percent strongly agreed that employers should provide training for specific tasks, 16 percent felt schools should emphasize employment-related skills over general knowledge.

Some (26% agree, 3% strongly agree) felt that local businesses should have a direct say in setting school curriculum. On the other hand, about as many (24% agree, 9% strongly agree) felt that "it is best to keep a clear division between schools and businesses."

The impression given is that these employers saw the school and local businesses as partners which can work together to provide general knowledge and employment-relevant skills that will help prepare students for the world of paid work. They seemed to feel that all students, not just those with lower academic standing, would benefit from such an arrangement.

Supervisors

Employers provided the initial contact with the NSSWT program, agreeing to take on a student for the work experience component. But that employer was often not the same person who supervised the student's work. Direct supervisors were asked to evaluate not only the work done by the student, but also to evaluate the program itself.[3] Their comments help to estimate the likelihood of sustaining the program beyond the initial three years.

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[3] The data from 283 supervisor questionnaires include information from 159 who supervised students from the 1995 cohort, and 124 who took students from the 1996 cohort. Each student was to complete two work placements, one during Grade 11, the second during Grade 12. Ten percent of the 1996 cohort supervisors took the same student for both work placements. There is no information on the number from the 1995 cohort who had the same supervisor for both placements.

Supervisors' expectations

Supervisors were asked to describe the different skills that the participants were expected to bring to the job and develop on the job. Table 5-6 shows the percentages who said students need to bring or develop a "high level"[4] of each skill.

There are a number of points of interest in Table 5-6. First of all, note the emphasis placed on communication skills and teamwork. About a third of the supervisors said they expected the students to bring to the job high levels of these interpersonal skills. Reading, writing and numeracy skills, while important to some, seemed to be less important than people skills.

As the right-hand column of Table 5-6 shows, supervisors also expected the students to develop these interpersonal skills while on the job. Over half said they expected participating students to develop the ability to communicate orally and to work in a team at a high level. Those skills that fewer were expected to bring to the job were also

Table 5-6

Supervisors' expectations of skills students would bring to the job and develop on the job

	Bring a high level to the job	Develop a high level on the job
Skill:	%	%
Reading written materials	12	22
Numeracy	16	22
Writing	10	18
Planning and organization	15	36
Problem-solving skills	14	35
Oral communication – interaction	33	58
Oral communication – giving information	30	56
Ability to work in a team	31	58

N=270

Source: Supervisor questionnaire, 1995 and 1996 cohorts skills few supervisors expected students to develop while working. Nevertheless, it is worth noting that between a fifth and a third of supervisors did emphasize these "other" skills: reading, numeracy, problem solving, and planning and organization.

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[4] Supervisors could choose from five levels; the numbers in Table 5-6 report only those listing the highest of these five.

The emphasis supervisors placed on communication skills and the ability to work in a team underscores the wisdom of combining the work experience component with in-school workshops. In many, if not most of the sites, the NSSWT in-school program focused on communication skills, through reflexive learning, discussing conflict management techniques and encouraging communication skills (see Thiessen 1998b).

Supervisors' evaluations

Data from supervisors evaluating their performance on a number of measures are available for the 1996 participants who had a second work placement (57 students). This section of the analysis is based on information from these 57 evaluations. These tables provide information on the ways supervisors perceived the students' performance.[5]

The first set of questions on these evaluation forms addresses issues of workplace behaviour: attendance, punctuality, appropriate dress and grooming, and adherence to safety procedures.

As Table 5-7 shows, almost all of the supervisors said students behaved appropriately in the workplace. Over 90 percent gave a high rating and none indicated a specific need for improvement in punctuality, appropriate dress or adherence to safety procedures. Only 4 percent indicated that attendance needed improvement and an additional 19 percent noted some absences, but were satisfied that the students called when they knew they would be unavailable. The clear message is that supervisors were satisfied with the students' behaviour.

The evaluation form also asked for each student to be rated in terms of their performance. The scale used was as follows: 10 = outstanding, 8 = commendable, 7 = competent, 6 = acceptable, 5 = marginal and 3 = unsatisfactory. Students were rated on their performance in communication, dependability, attitude, cooperation, planning and organization, initiative and problem-solving proficiency.

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[5] However, the results should be interpreted with caution since data are available only from the second work placements of the 1996 cohort; in one site, there was only one student with a second work placement; in another site, there were only four.

Many of the ratings were in the highest category for all these aspects of the students' performance (Table 5-8). About a third rated the participants' cooperation as outstanding. A quarter (25%) said the same of their dependability, attitude and initiative. Slightly fewer gave the student this high a rating on communication (11%), problem-solving proficiency (11%) or planning and organization (9%).

The overall picture is that the supervisors rated the students very highly on all these measures. None rated any as "unsatisfactory" (not shown). Only five students were rated "marginal" on any of these items.

This positive evaluation is confirmed by the fact that 72 percent of the supervisors stated on the evaluation form that they would be willing to hire the student if there was a part-time opening in their firm. However, less than two-thirds (63%) actually expected to be able to provide any summer employment (not shown).

Table 5-7

Supervisors' evaluation of workplace behaviour

	%
Punctuality	
Always on time	93
Needs occasional reminder	7
Improvement needed	0
Appropriate dress/grooming	
Consistently prepared for work situation	93
Needs occasional reminder	7
Lacks awareness of proper dress/grooming	0
Safety	
Aware of safe working conditions	93
Needs occasional reminder	7
Improvement needed	0
Attendance:	
Adheres to work schedule	77
Calls when absent	19
Consistency of attendance needs improvement	4

N=57

Source: Supervisor evaluation forms, 1996 cohort

Table 5-8

Supervisors' evaluation of student performance

	Rated as 10 %
Cooperation	32
Dependability	25
Attitude	25
Initiative	25
Communication	11
Problem-solving proficiency	11
Planning and organization	9

N=57

Source: Supervisor evaluation forms, 1996 cohort

Somewhat as a counter to this positive image, only a third (32%) said they would hire the student if a full-time position were available. While the students were evaluated highly for the jobs they did, other criteria seemed to become operative when companies were looking for full-time employees. A different set of questions from the supervisor questionnaires, rather than the evaluation form, enables us to examine this issue in more detail.

Expectations about future employment

One of the possible benefits for students from the NSSWT program was the potential for future employment with the employer who gave them work experience. Table 5-9 and Table 5-10, based on responses from the supervisors' questionnaire, show that while there was hope for some students, their chances were limited, particularly for full-time employment.

Table 5-9 shows the likelihood of part-time and full-time employment while the student was still in school. Less than half the supervisors offered much hope of even part-time employment; 36 percent rated the chance as good (50/50) or better. Even fewer (14%) felt there was much chance of a full-time job.

Table 5-9

Chance of ongoing employment while a student, part-time and full-time

	Part-time		Full-time	
	%		%	
None (0% chance)	18		42	
Low (1% to 24% chance)	20		23	
Fair (25% to 49% chance)	17		6	
Good (50% to 74% chance)	14		7	
Excellent (75% to 99%)	11	36%	4	14%
100% chance	11		3	
Do not know	11		15	

Part-time N=267; full-time N=226

Source: Supervisor questionnaire, 1995 and 1996 cohorts

Table 5-10 shows the supervisors' responses to a similar question but dealing with employment after the students had completed their education. Again, they reported more chance of part-time than full-time employment. About 4 in 10 (41%) rated the chance for part-time employment as good or better. Less than a quarter (21%) gave the same chance for full-time employment, even once students completed their education.

Table 5-10

Chance of ongoing employment when schooling is complete, part-time and full-time

	Part-time		Full-time	
	%		%	
None (0% chance)	12		17	
Low (1% to 24% chance)	15		23	
Fair (25% to 49% chance)	15		15	
Good (50% to 74% chance)	23		9	
Excellent (75% to 99%)	10	41%	8	21%
100% chance	8		4	
Do not know	17		24	

Part-time N=260; full-time N=234

Source: Supervisor questionnaire, 1995 and 1996 cohorts

The patterns depicted in Table 5-9 and Table 5-10 show that ongoing employment while the participants were still students was less likely than after they had completed school, and part-time work was much more likely than full-time. While the supervisors were, on the whole, quite pleased with the students who worked with them, they did not see this work experience, in and of itself, as leading to ongoing full-time employment. Rather, the work experience was seen as an asset in its own right, in terms of the more general work skills that it helped develop.

The students themselves were aware of this, as was shown in their questionnaire responses. While more than two-thirds said the work experience was very positive and helped them explore career options and develop relevant skills and abilities, less than half said the same about providing contacts with future employers or improving their chances of getting a more interesting or better-paying job. (See the previous chapter for details.)

Supervisors and the NSSWT

The analysis has so far focused on the supervisors' expectations and evaluations of participants. They also answered questions that dealt specifically with the NSSWT program itself. One issue was whether they would have hired a student to do the work being done by the NSSWT participant, had such a program not existed.

Over two-thirds said either they would definitely not (31%) or probably not (39%) have hired a student for that work were it not for the NSSWT program (see Table 5-11). An additional 4 percent said they did not know if they would have hired anyone. Many of these organizations saw themselves as having created this work experience for the student, even though there would not normally have been such a position available. This finding is, perhaps, not surprising given the employer altruism reported by the project coordinators and the strong commitment to the program's philosophy reported by the employers themselves (see Table 5-4, above).

This commitment is also evident in the supervisors' responses to the question: Would your organization hire another student associated with the Nova Scotia School-to-Work-Transition program (Table 5-12)?

Table 5-11

Likelihood of hiring without NSSWT

	%
Definitely yes	9
Probably yes	17
Probably not	39
Definitely not	31
Do not know	4

N=277

Source: Supervisor questionnaire, 1995 and 1996 cohorts

Table 5-12

Likelihood of hiring another NSSWT student

	%
Definitely yes	44
Probably yes	45
Probably not	1
Definitely not	0
Do not know	10

N=278

Source: Supervisor questionnaire, 1995 and 1996 cohorts

More than 4 in 10 (44%) said they definitely would hire another student associated with the program, and another 45 percent said they probably would.

This ongoing commitment is not only important for sustaining the program, it also indicates that supervisors had no problems or concerns with the students, the program or the research associated with the project that were serious enough to discourage their future participation.

Overall, it is clear that both employers and supervisors showed a commitment to the program and its objectives. The fact that they were willing to take another student in the future indicates that this commitment is ongoing. Schools in the participating areas can draw on this commitment, and on employers' empathy with the goals of the program, to ensure that the NSSWT program and others like it survive.

Schools and educators

Two key objectives were envisaged for schools that participated in the NSSWT project: to ensure that all educators have an appropriate understanding of the rapidly changing world of work, and to provide educators with a realistic view of employers and the workplace through internships and related experiences with employers (Eaton and Boyer 1995:5).

Only limited information exists that can be drawn on to examine the extent to which these two objectives were met. Some of these data limitations derive from the way in which the program was implemented in the different sites. Participating students were drawn not only from different school districts, but within some of those districts, students came from more than one school. For example, in Pictou, seven different schools were involved in the project, with only a few students from each school. Even in those districts that involved only one school, participating students comprised a minority in that school. Given this, the challenge was how best to get relevant information from the schools. A survey of some or all teachers at all the participating schools was clearly impractical.

A second difficulty was that it would likely take some time before teacher attitudes could be affected by a new program such as NSSWT, so surveying a sample of educators in the participating schools was not likely to provide useful information. Instead, it was decided to conduct focus groups with selected educators, some of whom were directly involved with the program (as in-school contacts for the project coordinator, as guidance counsellors or as members of the local management committee), and some who were not. Project coordinators, in their comments about the implementation of the program, also provided information about the schools, information that was supplemented by comments from participating students and their parents.

Focus groups were held with educators in both the first and the second year of the program. Table 5-13 shows the numbers involved at each site.

Table 5-13

Teachers' participation in focus groups in year 1 and year 2

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Year 1	6	6	5	6	3	6
Year 2	7	7	8	6	10	12

Note: Does not include focus group information from educators who were part of the local management committee.

Source: Case study reports

For the program to positively affect the schools, educators had to be both aware of, and supportive of, the program. In the focus groups, several educators expressed concern about the lack of information about the program, particularly in the first year of implementation. While there was some improvement in the second year, there was still a call for more and clearer information. Of particular concern in those sites that also had co-op programs was the lack of information about how the NSSWT program differed from co-op.

Most educators felt that their school supported the principle of developing partnerships with the wider community and making education more relevant to the workplace, although even here feelings were mixed. For example, in Truro, the report of the teachers' focus group concluded that, "Teachers ... were negative or at least sceptical about partnerships. ... They viewed partnership as resulting in a decline in the control that a school would have over education and they felt this would have negative consequences on the level or content of education" (Chaytor Educational Services 1997:60).

The NSSWT program was designed to help allay these fears and strengthen teacher awareness of workplace realities by including educators and employers on the local management committees. These committees were to be active in both the design and implementation of the program.

Local management committee

The proposals from all six sites indicated that a local management committee would be established, and in each proposal it was envisaged that this committee would meet monthly. The decision-making authority of this committee was to range from being an advisory group to all aspects of the program (in Truro) to total authority on all decisions (in Yarmouth). In the remaining four sites, this committee would make decisions on major issues, but leave the day-to-day decisions up to the affected parties.

As indicated earlier, it was considered desirable to involve various partners – students, parents, educators and employers – in the design and operation of each site. Establishing an active local management committee with appropriate representation from the various partners would be one effective way of accomplishing this. Table 5-14 shows the composition of the committee in each of the sites.

If one includes representatives from Chambers of Commerce and economic development associations as "representatives from the business community," then in all sites except Halifax, the local management committee included at least one representative from the business community. In several sites, at least three such representatives were on the committee.

Table 5-14

Composition of the local management committee by site

	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Program coordinator	1	1	1	1	1	1
School-board representative	1	1	0	2	1	1
Principal/Vice-Principal	1	0	1	0	1	0
Teachers	0	4	1	0	1	2
Students	2	0	0	2	1	2
Employers/Business community representatives	2	0	2	2	1	3
Parents	2	0	3	2	0	2
Other	3[a]	0	0	2[b]	1[c]	1[d]
Total	12	6	8	11	7	12

[a] Local HRDC representative, Chairperson of the area Chamber of Commerce, and Executive Director of the Cumberland Regional Economic Development Agency (CREDA) representative. [b] Executive Director of Northside Economic Development Assistance Corporation (NEDAC) and New Deal Board Member. [c] Central Nova Industry Education Council representative. [d] Town Council member.

Note: The structure of the local management committee stayed the same in the second year with the following exceptions: In Amherst, there were two educators instead of a principal, four students, four parents, no business community representatives and no CREDA representative. In Pictou, there were only two parents. In Sydney, there were two teachers, three students and no Executive Director of NEDAC. In Yarmouth, there were only two business community representatives and a recording secretary.

Source: Project coordinators' records

In all sites, the committee included at least one educator, although Amherst and Sydney had administrators rather than teachers. Pictou and Truro had one teacher, Yarmouth and Halifax had more than one. It should be noted that the Halifax proposal envisaged an elaborate local management committee structure that would have been the envy of all. It was to be chaired by the supervisor of Community Education and, in addition, would have included the project coordinator, four in-school coordinators and representatives from business, local school councils, labour, community colleges and universities. Unfortunately, it was not put in place.

Ensuring ongoing communication between partners would be facilitated by having partners represented on the local management committee. In the first year, the committees in Amherst, Sydney and Yarmouth had particularly diverse representation, while Halifax had the sparsest. With the possible exception of Halifax, the local management committee representation augured well for ensuring good communication links between partners.

In the first year, the local management committees were quite active, with an estimated 7 to 10 meetings held in each site. Such activity was congruent with the program proposals and the expectations of the program designers. But the number of meetings dropped drastically in four sites during the second year. Yarmouth was the only site that retained the same number of meetings; Sydney still seemed to have a healthy committee, and the Truro committee held three meetings. In the final year, all local management committees except the ones in Yarmouth and Truro were essentially dormant, holding no formal meetings. Thus, although the structure was there to establish solid communication links with partners, it did not continue to be used effectively except in Yarmouth, and perhaps Truro (Table 5-15).

Table 5-15

Number of formal local management committee meetings, by implementation year and site

Implementation year	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
First year[a]	7	10	10	10	10	10
Second year	1	0	1	6	3	10
Third year	0	0	0	0	1	8

[a] Calculated on the basis that meetings took place once a month except in Amherst where meetings occurred every six weeks.

Source: Project coordinators' questionnaires and interviews

Attendance at the committee meetings was also sporadic, especially among employers. Pictou and Amherst, for example, estimate that employer representatives attended only about half of all meetings. Their absence weakened the potential for partnership.

While educators had input into the design of the program in all sites through participation in the local management committees, they had little input into its implementation.

Other educators, not on the committees, noted in the focus groups that they had little say in how the program was offered in their school, although many would have liked to have been more connected with either the in-school or the work-experience component.

Given their lack of connection with the program, these educators felt the program had not helped connect workplace realities with appropriate education. Analysis of the focus group discussions concluded that the program was not successful in building these links, partly because of the lack of involvement and lack of understanding teachers had of the program. Students in the program and their parents repeatedly expressed concerns about teachers in other classes criticizing or penalizing participants when they missed classes due to NSSWT commitments.

Internships and in-services

One aspect of the program that was designed to bring teachers on side was having a combination of internships and in-services for educators in the participating schools. Table 5-16 shows what each site proposed in this respect and what was actually done.

With respect to internships, Pictou promised none and provided the most (22). Yarmouth proposed four per year and provided 12, all in the final year. Sydney gave no precise numbers but provided a total of 18 over the final two years. Both Halifax and Truro indicated that internships would be made available to an unspecified number of designated personnel. Three and four internships, respectively, were provided. Finally, Amherst was most disappointing in this respect; it proposed a minimum of six but failed to provide any.

With respect to in-services, all sites except Amherst proposed to have an in-service on a topic relevant to school-to-work transition. All sites except Halifax had such an in-service in one of the three years the program ran.

These in-services varied in terms of how directly they addressed the NSSWT program itself, and/or workplace realities. For example, the 1995 in-service in Sydney focused on entrepreneurship and the new economy; the one in Truro involved teachers going to the nearby Agricultural College. Some teachers felt these in-services and the internships offered a chance to change their image of the world of work. However, most teachers at most of the sites had little exposure to these experiences. Given the diversity of settings and the small number of students involved in the program, it is perhaps

Table 5-16

Teacher internships and in-services proposed and implemented, by year and site

Internships	Amherst	Halifax	Pictou	Sydney	Truro	Yarmouth
Proposed	At least 6	Designated opportunity[a]	0	Open opportunity	Designated opportunity[b]	12
Implemented						
1st year	0	0	15	0	0	0
2nd year	0	3	4	10	4	0
3rd year	0	0	3	8	0	12
Total	0	3	22	18	4	12
In-services						
Proposed	0	1	1	1	1	1
Implemented						
1st year	0	0	0	1	1	1
2nd year	0	0	0	0	0	0
3rd year	1	0	1	0	1	1
Total	1	0	1	1	2	2

[a] Any teacher who could identify a career related to the subject he or she taught.

[b] Project coordinator, some Grade 11 educators and student services personnel.

Source: First- and second-year case studies and project coordinator questionnaires

unrealistic to expect the presence of the NSSWT program to have had much of an effect throughout the participating schools.

The impression obtained from the educators who took part in the focus groups, the students and their parents is that some teachers and counsellors were supportive of the idea of a school-to-work program. Indeed, the program could not have been implemented as well as it was without such support. Where the program met particular resistance was in sites where it required students to miss other classes. In these situations, teachers not directly involved with the program were critical and unsupportive.

Employer and school outcomes in review

This chapter presented the available data on the perceptions of employers and educators in the NSSWT program. The next step is to review this information to see how well the program can be said to have met the specific objectives set for these stakeholders.

The four objectives for the employers can be grouped into two sets. The first set addresses the issue of skill development by the students.

Employers' Objective 1: To assist high school students to develop generic and specific skills.
This objective parallels the third objective for students (that they develop generic and specific skills leading to jobs with potential), reviewed at the end of the previous chapter. As indicated there, on three measures of skills – the International Adult Literacy Survey, the American College Testing WorkKeys and the students' self-assessments – little effect on skill development that could be attributed to the program was found. Both participants and the comparison students improved their skills from the beginning of Grade 11 to the end of Grade 12, to a similar extent.

While one cannot conclude that employers did *not* assist the participating students in developing these skills, the results indicate that the comparison students were able to develop them without this assistance.

Employers' Objective 2: To provide skills training in a learning environment.
This objective overlaps considerably with the first. While there is little evidence of skill improvement among the participating students, this does not rule out the possibility that employers provided this skills training. Again, if there was skill training that derived from the work experience component, there is little evidence that this training had an effect different from the benefits the comparison group obtained from either their schooling or their experiences in jobs they found on their own.

The high levels of support that employers showed for the program and its ideals suggest they were willing to be involved in skills training in a learning environment. However, the limited data from the participating employers does not allow a definitive test of how well the program met this objective.

Employers' Objective 3: To enhance employers' involvement in, and commitment to, education and training.

One way of evaluating the program's success in meeting this objective is to consider the attitudes expressed by employers and supervisors. They were enthusiastic when the program began and maintained this enthusiasm throughout the program. Their responses when a particular student had completed the program were more modest, but strong support for the program and its objectives remained. In fact, most supervisors indicated they would take another student in a work placement.

These responses make it evident that the program developed a positive image in the business communities from which the students were drawn. This positive image, and enthusiastic endorsement, are resources that can provide the foundation for a sustainable school-to-work transition program.

We do not have time-ordered data from the same employers. One set of employers was surveyed at the beginning of the student's work placement and the student's direct supervisor was surveyed at the end. Feedback from these employers indicated they were reluctant to take time to complete multiple surveys, so questionnaires were kept short, and the number kept to a minimum. Given this, it is not possible to track how their images about work and education changed over the course of the program. One can, at least, state that the program did not seem to diminish the commitment employers and supervisors had to such endeavours, in terms of their willingness to take additional students.

Another way of examining this issue is to look at employer involvement in the design and implementation of the program. It was previously noted that all sites but one included business representatives on the local management committee. These employers played a role in the design of the program at their site. However, it was also shown that, in most sites, these committees became less active once the program was up and running. Given this, employer involvement tended to be restricted to providing work placements for participating students. Additionally, a number of employers participated in the in-school component to conduct mock job interviews and as speakers on topics such as employer expectations. These activities are also a form of partnership.

Feedback from employers confirms their interest. In focus groups during the first year, employers commented that their only contact with the program came through the project coordinator. They had little knowledge of the in-school component or how it was organized. They did not understand the structure of the program or how decisions about it were being made. They felt they had something to contribute, but were given little opportunity to become more involved.

These results suggest that there is little evidence that the program enhanced employer involvement in, and commitment to, education and training. This conclusion partially reflects the fact that some of the relevant information (such as changes in employer attitudes) is not available. It also reflects the fact that the main thrust of the program was directed at students. Nevertheless, the results also suggest that there is fairly strong support among the business community for enhanced contact with the schools.

Employers' Objective 4: To enhance employers' ability to work in partnership with schools and other key partners.

Again, there is considerable overlap with the objective just discussed. The main opportunity for developing partnerships was through employer involvement on the local management committees. As was seen, employers played an active role on these committees, when invited. Their role diminished over the course of the program as the number of meetings declined.

Another opportunity for involving employers was in providing information to teachers through an in-service or an internship. While these were provided in some sites, they were not as developed as they could be – or as the different sites indicated they would be.

At best, the evidence would suggest that some work was done that would enhance these partnerships. However, both educators and employers indicated that there was the potential for a lot more of these partnerships.

The next section presents an overview of the specific objectives the NSSWT program had for educators at the participants' schools.

Schools' Objective 1: To ensure that all educators have an appropriate understanding of the rapidly changing world of work.

Given the ambitious wording of this objective, it would be impossible for any one program to fulfil it. Certainly, attempts were made to involve educators in the local management committees, in in-services and internship programs, and in the delivery of the in-school component of the program.

However, the discussion of employers' involvement in the local management committees made it clear that these committees provided only a limited forum, given that they became effectively dormant except in one or two sites. Further, the focus groups with educators revealed that they do not feel they, or other teachers, have a clear idea of the changing work environment. Neither the students nor the educators felt there was much opportunity for students to discuss their work experiences in classes other than NSSWT. While there was some recognition that younger teachers might be more aware of the changing world of work, most teachers focused on their own subject speciality. There were mixed feelings about how important it was to involve teachers in developing this awareness.

Schools' Objective 2: To provide educators with a realistic view of employers and the workplace through internships or other kinds of related experiences.

It was previously shown that the number of in-service and internship opportunities offered in the different schools were limited, and not always focused on issues directly relevant to the mandate of the NSSWT program. Some educators expressed frustration that so little information about the program was available to them. They also expressed an interest in learning more, but were not convinced that the best way to do this was via an in-service or internship, both of which required a considerable investment of time.

Educators also expressed some ambivalence about how involved they wanted to get with employers and businesses. There were concerns that too close a "partnership" with business could compromise the traditional autonomy of the schools. While the employer surveys indicated teachers have little to fear in this regard, at least from the employers who participated in the NSSWT program, the fear nonetheless is there.

Again, the evidence that can be drawn on is limited. It indicates that some sites did make use of in-service and internships to promote teacher awareness of workplace issues. How successful those efforts were, however, cannot be determined from the available data.

Conclusion

This chapter has revealed that the objectives of establishing stronger links between the spheres of school and work (educators and employers) were not realized to their full potential. While employers expressed a desire to extend their involvement in the in-school component of the program, such involvement was rare. Educators voiced their interest in learning more about the program but expressed some hesitancy in established partnerships with business. These are the challenges facing future programs in trying to establish a bridge for students in transition between these spheres.

These findings provide important background to the lessons learned throughout this project. It is to these lessons that attention is now turned.

6 LESSONS LEARNED AND LESSONS CONFIRMED

Introduction

This chapter provides a wide range of material from practical and concrete implementation guidelines, to broad assertions about the underlying assumptions of any school-to-work program. This approach is based on the belief that day-to-day policy matters need to be addressed in the context of broader philosophical issues. Specific recommendations appear throughout the chapter, and are summarized at the end.

Some of the lessons emerge from findings detailed in earlier chapters, and where appropriate, these are briefly reviewed. Other lessons rest on looking at some of the evidence from a different perspective and drawing new inferences. Finally, some lessons take the form of more subjective impressions, based on the researchers' overall familiarity with the project and its implementation. This chapter focuses on all these lessons and their policy implications.

Site differences and best practices

As documented in the Design and Implementation chapter, the NSSWT program was implemented in six sites throughout Nova Scotia. Despite common features, each implementation was distinctive. With only six sites, and with many differences in each of them, it is impossible to prove that any one desirable outcome is due to a particular practice at a given site. Nevertheless, the richness of data for each case provides important clues about the underlying dynamics and the lessons that can be drawn from them.

The question, then, is whether the differences made a difference. Was the program more effective in some sites than in others? That is a difficult question since there are so many diverse aspects to effective design. Some sites produced a higher high school retention rate; others had more success providing appropriate work experiences; still others helped educators better understand the changing work world. A more manageable question is this: did variations in practices produce different results? The evidence on this is clear: the NSSWT project documented several dramatic differences. One of these related to how well participants performed academically, relative to the comparison group.

The contrast between Truro and Pictou in meeting university-admission requirements is particularly worthy of note. In almost every aspect, the Pictou NSSWT graduates performed better than the comparison group. Sixty-four percent of NSSWT graduates at this site met or surpassed all requirements for admission to Dalhousie University's BA program, compared to 55 percent of the comparison students. This is in stark contrast to Truro. Here, only five percent of the NSSWT graduates met the admission requirements. The Truro comparison group on the other hand met these admission requirements in 54 percent of cases. Thus, there is a 59 percentage point difference between the two sites in this respect. This is admittedly an extreme example, chosen to show that implementation differences can make a dramatic difference.

Overall, however, there is no one correct school-to-work transition model. It is important to note that each implementation consists of a "bundle" of practices. Every site exhibited some exemplary and innovative features. Some of the practices worked well only because they were coupled with other practices or were put in place under particular conditions.

It is equally true that project coordinators had a profound impact on the nature, dynamics and effectiveness of the program. Staffing these positions is of paramount importance. An ideal project coordinator communicates well both orally and in writing; is outstanding in organizing and planning; understands group dynamics and applies them to make groups dynamic; is up-to-date on labour market trends; knows the community and its resources; and has extensive contacts with the business community. Enthusiasm and belief in the value of programs such as the NSSWT program are definite assets.

What would happen if one took the best and worst implementation and simply exchanged instructors? To what extent would the effectiveness of the program follow the instructor? This is more than an idle speculation since in many ways the school-to-work coordinators are key to the initial success of the program. An excellent coordinator understands the school system, communicates well with parents, knows how to approach employers, is well received by participants, keeps in touch with the community and understands the local economy. More so than in any other school subject, mastery of the subject is barely a beginning. That does not mean that the quality of instruction cannot be improved. Indeed, part of the aim of this book is to provide some of the necessary information and guidance that would improve future programs.

Considerations for program design

Delayed transitions

Traditional social markers of transition to adulthood have been delayed and blurred in recent decades. Marriage, for example, has been postponed by about four years for both young women and young men. Completion of formal education and subsequent full-time entry into the labour market also occur later, the latter particularly for young men. Simultaneously, biological markers associated with emerging adulthood appear earlier. Opportunities to practise adult roles have dwindled at precisely the time that the need to be appreciated as adults has grown.

These factors are intimately connected with the success of the NSSWT program, since it presented opportunities for participants to practise adult roles, and to be treated as young adults. As one project coordinator noted:

> I treat them like adults and therefore I get kids that act like adults and I think that's key. If you want kids to act like adults, you have to treat them as such. That's what I do. I think Dennis benefited from it. In one of his first journals he wrote, "It's really good to be with a group of people where it's okay to give your opinion." Dennis was the student who would talk to me for 45 minutes at a time. I think it was good for him to have a positive relationship with a teacher.

Participants drew contrasting pictures of the nature of school and the nature of the NSSWT program. For many, school was disappointing, something they couldn't wait to see end. As one participant noted, "I just didn't feel like doing school anymore. It's like 12 years is too much." One reason for students' dissatisfaction stems from the emphasis on rules at a point in time when they feel they should be allowed to make independent decisions. One participant chafed at the fact that he had to ask teachers for permission to go to the washroom. The project coordinators, on the other hand, treated them more as adults.

How can adult role practice be increased? In an adult world, the points of view of members affected by any decision are elicited, discussed and evaluated prior to action being taken. This was often done in the NSSWT program. In Amherst, for example, in response to some concerns about the time of day in which the in-school component was offered, the project coordinator asked participants to discuss the issue. They chose to have the in-school component during precisely the same time as it was currently being held – the lunch hour. Partly as a result of this, from about half to three fifths of the participants expressed a high level of satisfaction with when the in-school component was delivered.

As a second example, in Pictou, once the minimum number of hours of the in-school component had been held, participants were asked whether they wished to attend additional workshops. The class voted overwhelmingly to meet again. Likewise, interactive learning, where participants discuss various work placement and transition issues, symbolically sets the expectation for adult behaviours in the classroom.

The importance of being treated as adults extended also to the nature of the work experience. Participants did not want to job shadow; besides not giving them work experience and much needed skills, it would not put them in an adult role. Adults do not shadow jobs, they perform them. The challenge for future school-to-work transition programs is to increase the opportunity for participants to practise adult roles, while providing the necessary support and structure that young people need.

Given the name of the program, it would not have been unreasonable to expect it to attract those youth who were planning a direct entry into the labour market following high school. But that is not the case. On the registration form, only 1 in every 20 applicants had such an expectation. Nor was there any gender difference; since at that point in time, males were no more likely than females to consider work as their immediate post-high school path. The lesson from this finding is that promotion of such programs should not rest on the assumption that interest is based on an expectation of work as the post-high school path.

In that case, is the term "school-to-work transition" a misnomer? The short answer is yes, but with two important qualifications. The first is that, especially for young men, a direct transition to work becomes a likely reality for a significant minority. Nearing the end of their high school experience, 3 in every 10 young male NSSWT graduates, and about half as many of their female counterparts, indicated they planned to work full time immediately after high school. So, although very few students initially expected to work directly after high school, preparation for such a transition is appropriate for a significant number. Second, over half the male NSSWT graduates (56%) and about a third of the female graduates (32%) considered a direct entry from high school into the labour market at some point during their final two high school years. These numbers are sufficiently large that, even if it is agreed that a direct transition to work is undesirable, the program must prepare participants for that possibility.

No single transition charaterizes all high school students. One cannot even say that leaving high school is the common transition, since a sizeable, and perhaps increasing, number stay in high school the year following Grade 12 to improve their marks or to take classes that are prerequisites for admission to particular post-secondary programs of interest to them.

Nevertheless, it is also important to raise the issue of whether high school is the best place for a transition to work program that targets a broad range of students. Might such a program be better offered at the post-secondary level? Certainly, a case could be made that many post-secondary institutions could better prepare their students for direct entry into the work world. What is more, such preparation need not be limited to those in programs with a clear vocational or occupational focus. However, since post-secondary institutions are so diverse, and are more autonomous than secondary schools, it is unclear how one could institute a common program that would be offered by more than one institution.

The challenge at the high schools, then, is to prepare youth for their eventual transition to work. In that sense, the term is appropriate since, almost without exception, all young people in the NSSWT program expected to be part of the labour force during much of their adult life. The more immediate transition that most of them face, however, is the transition to some form of post-secondary institution, most often a university. One might envisage a "transition-to-post-secondary" program in high schools. Outlining the form such a program might take, however, is beyond the scope here. Having said that, student desire for post-secondary education in general, and university education in particular, needs to be taken into account in the design of any high school program such as the NSSWT program.

Gendered attractions and gendered impediments

As the preceding discussion implies, an important question for any voluntary program concerns who would be attracted and what would attract them. That the program had something to do with work experience and career preparation is self-evident. On the face of it, one could say the program was attractive to those who were concerned about their future and were interested in having supervised work experience. Certainly, these were the responses participants gave when asked why they applied to the program in the first place. However, there is another way of looking at this question, one that focuses more on the underlying dynamics than the literal accounts. This approach concentrates on the characteristics of applicants that might distinguish them from other students.

As shown in Chapter 2, the NSSWT program attracted twice as many young women as young men. Perhaps adolescent females, more than adolescent males, are concerned with preparing themselves for a career. This gender imbalance is unfortunate, since Chapter 1 clearly revealed that boys are consistently more likely than girls to withdraw from high school. Many of these students have the academic ability to complete high school and a program such as NSSWT could make high school more attractive to them. However, it can have this effect only if it attracts them. A program designed to facilitate post-high school transitions therefore needs to ensure that it attracts those who would benefit most, which may mean making special efforts to appeal more to those most in danger of dropping out.

Not only did the program attract more young women than young men, it appears to have attracted them for quite different reasons. Examining simultaneously the participants' academic performance, their post-high school plans and the education of their parents reveals several noteworthy patterns. First, the most frequent category of participants is young women from households where neither parent obtained a university degree but who themselves are doing well in school and who plan to attend university full time. This suggests that capable young women wishing to improve their position relative to that of their parents were attracted to the NSSWT program, using it as a means of making better school-to-work transitions.

The largest group of young male applicants is also from households where neither parent holds a university degree. However, in contrast to their female counterparts, they were performing below average in school and going to university full time immediately after high school was not in their plans. This suggests that the NSSWT program attracted many young men for very different reasons from those that appealed to young women. These young men envisaged an early entry into the labour market, perhaps with occupational aspirations into blue-collar jobs. The gender difference in the proportion of NSSWT graduates who in Grade 12 plan on a direct entry into the labour market supports this interpretation. Krahn (1996:19) noted that, "Few young Canadians aspire to technical jobs or careers in the skilled trades" and that the "apparent negative stigma attached to the skilled trades might deter many young people from participating" in youth apprenticeships. Understanding these dominant gender differences is important if the expectations of both genders are to be met.

A main goal of the NSSWT program was to facilitate transitions from high school to appropriate post-secondary paths. To accomplish this goal effectively requires a thorough understanding of the nature, severity and distribution of the barriers to successful transitions. The NSSWT program was based on the belief that lack of a high school completion certificate would present one such barrier to appropriate transitions. Likewise, many employers consider prior work experience important in hiring decisions; lack of work experience would impede effective transitions for some students. Other barriers include such things as insufficient generic skills and insufficient information about the nature of various occupations. These are well-known barriers discussed in the literature.

Particularly through the in-depth interviews with various participants, their parents and the project coordinators, a gendered impediment loomed increasingly large. A pattern emerged in which male youth exhibited a strong need to be on their own and to exert their independence; they chafed at school rules and regulations and were dissatisfied with high school. Several were expelled from school for short periods of time. In the NSSWT program, both the employers and the project coordinators treated them as adults, which did not remove the rules but made adapting to them easier. The program essentially acted as a safety valve. Simon, for example, made it very clear that he did not like school and was "just bored of it … Don't want to go to it. Don't like it at all. Just can't wait to get out of there." He credited the NSSWT program for keeping him in school, saying:

> Like it might sound stupid or whatever, but the one day a week that I don't go to school and go to work it helps me a lot 'cause I don't like going to school like a full week. Like I just need something to look forward to every week. And it's not a waste of time either 'cause I go and work, right? I learn a lot … I learned more with the placements than I do in class.

If lack of freedom and an entrenched authority structure are obstacles for sizeable numbers of young men, self-confidence issues emerged as the impediment to successful transitions for many young women. Their lack of self-confidence made them hesitant to explore career options. Indeed, many were unable to consider alternative career possibilities because it never occurred to them that they might have the necessary ability. Several of the project coordinators recognized that overcoming shyness and lack of self-confidence was a prerequisite to future transitions. They wisely chose work placements where the personality of the supervisor and the structured opportunity to present oneself to the public took precedence over congruence with expressed career interests.

The importance of choosing committed employers to work with the students is highlighted in Michelle's case. She says, "I learned a lot with (my employer), she was really great." What this employer helped Michelle learn, in addition to practical skills, was how to develop her interpersonal skills. Michelle explains that her employer didn't push her, but gently encouraged her to use the telephone and contact the public: "She was really good. She'd say, 'If you're going to university you've got to know how to use a phone by yourself, you can't call your mom (for help)' and it was really good so I learned how to deal with people more than I did before." Michelle developed the confidence because she felt like a real part of the workplace: "I was always helping her and then helping people and she gave me jobs and she left the office a few times and I was like there so I wasn't being put in the corner…"

Note how another project coordinator was aware of Betty's shyness and took it into account for her work placement:

> Betty is incredibly shy. She's very quiet and in the workshops she worked very well in paired situations, and one on one but in a large group she just kind of doesn't say very much but she's a listener. Betty especially benefited from the work placement because she worked with (employer). He is very open and friendly – gave her a lot of responsibility and the chance to interact with him alone. She might have been lost in a large work placement but she felt she came a long way in terms of communication skills and in terms of confidence and I think she did.

Program designers need to be sensitive to the different needs and the different futures facing young women and young men to ensure that their program meets the needs of both.

Preparing for university and levelling aspirations

The program touches on a point of tension. A key feature of the Canadian educational value system is the pinnacle position of universities. University attendance is the post-high school path of preference: more youth desire to attend university than expect to attend, more youth plan to attend than actually do, and more parents hope their children will attend than the number of children with this desire.

Not surprisingly, teachers share this value. As a result, they see their role as encouraging and preparing young people to continue their education. More specifically, many teachers see their task as preparing students for university.

The tension arises when one recognizes both the high value placed on university and the fact that not all high school students can (or should) attend university. So, one fundamental problem for school-to-work-transition programs is to structure them in such a way that they are not, nor are they perceived to be, a potential barrier to university admission. Recognition of this issue has many ramifications. It implies, for example, that school-to-work-transition programs should minimize the number and amount of time that participants are required to miss other classes. Weekends, evenings and summer placements would, from this perspective, be preferred.

The more the NSSWT schedule caused students to miss other classes, the greater the opposition of teachers to the program. Indeed, participants recounted instances of outright hostility. Hannah says:

> I had a teacher come up to me and tell me I would not pass his course if I was in NSSWT… I think it's, honestly, it's a nuisance for them to prepare the work for the students who weren't going to be there because of NSSWT and to try to schedule tests around those students and everything else, like we were just kind of, you know, putting an obstacle in their schedule, right, and they didn't like seeing change.

Part of the difficulty is the additional work required of other teachers when students miss classes and tests. To some extent, this problem reflects insufficient communication. Some teachers apparently were not aware of who was in the program and what their work schedules were. In order to have ongoing acceptance by educators, parents and students, it is important that both the in-school and the work experience components not interfere, and be seen not to interfere, with other parts of the student's schooling.

On the other hand, in a country that prides itself in equality of access to higher education, it is important to develop sorting mechanisms that help guide young people to the type of post-secondary institution that is right for them. In light of the near-universal aspiration to attend university, the task is to make non-university institutions more appealing.

The NSSWT program seemed to be instrumental in this respect. As documented in the chapter on student outcomes, one effect of the NSSWT program was to increase the percentage of participants whose post-high school plans included trade, technical and vocational schools, and decrease the percentage considering only university as an option.

Not only did the program help level their aspirations, it helped participants implement their new plans: about half (48%) of the participants who attended some form of post-secondary institution attended a community college or a trade, technical or vocational school, compared to about a quarter (22%) of the comparison students. On these grounds alone, it could be argued that such a program is warranted.

Skill enhancement

The NSSWT program was designed to expand and hone students' transferable skills. But little evidence was found for such increases that could be attributed specifically to participation in the program. Although skills such as teamwork, listening and observing improved over the course of the program, this was due to maturation, since the same improvements occurred in the comparison group.

It may be that the measurement of such skills is not fine enough to detect genuine differences between participant and comparison students. Yet, the measures were sensitive enough to capture maturation effects. That means that any effects attributable to the program are not particularly pronounced.

An additional reason why the program may not have had a marked effect on transferable skill development is that most high school students also obtained work experiences on their own. Only 8 percent of students in this study had no paid work experience outside their NSSWT work placements. Perhaps skill enhancement occurs even in the low-skill jobs typically obtained by high school students.

In most discussions of transferable skills, the assumption is that such skills are relevant only to the work world. A strong case can, and should, be made that the division between work skills and academic skills is illusory. Most skills that improve academic performance are also useful at enhancing performance at work. If adults do not articulate this, it is hardly surprising that young people are unaware of this fact. Less than one in every five (16%) participants who pursued post-secondary education felt the program had very much helped them develop the skills they currently needed. If the skills encouraged in the program are transferable, project coordinators need to show how a variety of the skills emphasized in the program can also be applied to becoming a better student.

Which generic or transferable skills should be emphasized? Good school-to-work-transition programs would redress skills that are in short supply. Young people believe they are good team players but relatively poor problem solvers. The chapter on student outcomes showed that more than 6 in every 10 students rated themselves at the highest level on teamwork, but less than 1 in every 4 rated their problem-solving skills at this level. Taken at face value, this suggests that high school students receive opportunities, guidance and reward for working in groups, but not for solving problems. In this context, it is particularly gratifying that participants' self-ratings on problem solving skills improved significantly more than it did among the comparison students. Not only is this skill valued by employers, it is significantly related to overall academic performance, and especially mathematics.[1] Self-ratings on some of the other skills, such as teamwork and oral communication skills, although valued by employers, are nevertheless unconnected to academic performance. Numeracy was another skill for which students recognized there was room for improvement. Self-ratings on this skill are especially closely connected with academic performance. It would certainly be desirable that future programs pay greater attention to developing skills such as problem solving and numeracy, that are prized both in work and in school.

Employers seemed particularly keen on students developing communication and teamwork skills. While these may be skills that many students feel they already have, given employers' expectations school-to-work programs may need to ensure that attention is paid to developing and enhancing these skills.

In any event, a school-to-work program cannot be justified solely on the basis of the development of transferable skills. If one is put in place, it must be on other grounds. One of the lessons learned is not to set too high hopes on school-to-work programs. They are not a panacea. Nevertheless, as will be seen below, valid claims can be made about the benefits of programs like NSSWT. Many of the remaining "lessons learned" focus on designing a program that will maximize these benefits, based on the experience with the NSSWT program.

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[1] The correlation between self-ratings of problem-solving skills with Grade 10 grade-point average and with Grade 10 mathematics marks is 0.28 and 0.34, respectively. These are impressive in light of the fact that none of the analogous correlations with teamwork or with the oral communication measures exceeded 0.11, and do not even reach statistical significance.

Program structure

Identity

Individuals perform better when they feel part of something special. This is known in industrial psychology as the Hawthorn effect. Undoubtedly part of the success of the NSSWT program is due to this phenomenon. The physical separation of the program from the school in some sites helped stamp it as a distinct and special entity. Project coordinators implicitly recognized the importance of creating and maintaining a group identity. In settings like Truro, where the program was integrated into the school curriculum, the project coordinator made extra efforts to create unique symbols for the program. These included T-shirts, sweatshirts and coffee mugs adorned with a school-to-work-transition logo. Such group identity gave students a sense of taking part in something extraordinary.

Length

The program design stipulated that the program was to be two years long and to begin in Grade 11. Consequently there is no variation by site on these elements. Nevertheless, a number of considerations emerged that are relevant to these issues. With respect to length, sufficient in-school material exists for a two-year program. The number of workshops, the number of relevant topics and the need for ongoing interactive learning would suggest keeping a two-year program, or shifting the number of hours allocated to the in-school versus the work experience component.

Most participants who remained for the full length of the program felt two years was needed, and very few of these students found the second year repetitive. The responses to the Grade 12 segment of the in-school component were about as positive as for the Grade 11 portion.

Arguing against a two-year program, at least in its present form of two separate work placements, is the potential difficulty of finding sufficient work placements. If the program were designed with only one work placement, twice as many participants could be accommodated with the same number of employers.

Also, among the project coordinators consensus emerged that a one-year program is preferable to two years. They based this primarily on the knowledge that the competing demands in Grade 12 are so great that many students find the time commitment too much and therefore withdraw.

Given the time demands on students, particularly in their final year of high school, it would seem better to have a one-year program that covers core topics in the in-school component. If it is necessary to expand the number of hours in this component, the number of hours committed to work experience could be reduced. The experience in all sites indicates that 20 hours for the in-school component is too short. On the other hand, 140 hours for the work experience is too long, and it would be advisable to reduce this component substantially to perhaps 100 hours.

Although the program designers knew that the time requirements would be intensive, they may not have fully appreciated the number and nature of competing demands on the lives of high school students. Other NSSWT reports document, for example, the high percentage of participants who simultaneously held down part-time jobs and participated extensively in volunteer activities (see Thiessen 1997a).

The attrition rate is one indication that the length of the program needs to be reconsidered. It is intimately intertwined with the question of the appropriate length of a school-to-work transition program. The two-year attrition rate in the NSSWT program, at 56 percent, is unacceptably high. As might be expected, attrition during the first year was only half as high (27%). Clearly, if a two-year program is to be maintained its current format must be modified.

If the program is to be two years long, then serious consideration must be given to ensuring that the second work placement is either a paid placement or occurs in the summer prior to Grade 12. This conclusion emerges out of the fact that substantial proportions of high school students have jobs during the school year, which often competed with the NSSWT work placement for their time and commitment. The dramatic improvement in the program completion rate in Pictou is due, to some extent, to its use of summer work placements.

Given that the highest school withdrawal rate occurs in Grade 10, it also makes sense to start a school-to-work program in that year, rather than in Grade 11 as is the practice in the NSSWT program. There are several advantages for implementing a school-to-work program in Grade 10. First, some of the students who withdraw in Grade 10 may do so because they believe school has no relevance to the job market; a school-to-work intervention at that point in time might induce them to remain in school at least one more year, if not until they complete high school. Second, those who drop out at this early stage are most in need of a school-to-work program. By not making such a program available until Grade 11, those most in need cannot benefit from exploring their work options or preparing for the world of work, both of which could make their transition a smoother and more successful one. Note that the withdrawal rate drops in Grade 11 and again in Grade 12, reinforcing the conclusion that Grade 10 is a pivotal year with respect to leaving school.

The project coordinators were of different minds on the issue of whether it would be desirable, or even feasible, to begin the program in Grade 10. The main concern was whether Grade 10 students would be mature and responsible enough. If the decision is made to have a two-year program, one possible option is to start the in-school component in Grade 10 and the work experience in Grade 11. If the decision is for a one-year program, there is no additional evidence to argue against offering it in Grade 10.

In future school-to-work transition programs, it will also be important to control the number of admissions, since appropriate work placements must be found for each participant.

Where the number of interested students exceeds the number that can be admitted, it is recommended that when admitting students to the program a simple random assignment selection procedure be used. Project coordinators commented that students appreciated the fact that such a procedure ensured that everybody had the same chance of being accepted into the program and that favouritism, or other unstated grounds, were effectively ruled out through random assignment. Random assignment is blind. Such a process helps the program to avoid gaining a reputation for being only for students with particular characteristics. Young people, like others, chafe at unfair procedures.

In-school component

Content

It is to be expected that aspirations exceed reality. Young people's hopes for the future soar. As the NSSWT project showed, they are incredibly optimistic about their future. This optimism extends to their expected career. If high aspirations are to be expected, and perhaps even encouraged, how does one prepare for the reality? How can project coordinators guide, advise and help prepare young people for a future that will likely differ from what students imagine? One of the strategies that can be fruitfully used is to emphasize side bets or fallback positions.

Over the three years of the NSSWT program, certain subjects were covered in each of the sites. Pre-placement topics included all aspects of what is generally thought of as self-presentation and job-finding skills and strategies. These included writing résumés and covering letters; preparing for job interviews, understanding employer expectations and knowing workers' rights.

Less consensus emerged on post-placement topics. However, there was agreement that participants needed to develop an occupational profile of their expected future jobs. This would include aspects such as the skills required for that job, the types of job opportunities, the type of related occupations and the nature of their connection, and different pathways by which such a job could be obtained. There was agreement that lessons learned from the work placement needed to be discussed in the group, in addition to maintaining a personal journal of the work experience.

If the content is not responsive to local labour market conditions and community concerns, then it risks being irrelevant. However, there is also the issue of whether schools should be preparing students strictly for the local, or for a wider, labour market. This issue was raised in focus groups in many of the sites outside the Halifax area. Perhaps the solution is to offer a common core content that would be covered in all sites, and an elective site-specific content. This would permit limited, but not unconditional, flexibility.

Format

Perhaps even more important than the topics covered in the in-school component of a school-to-work program is the format in which they are presented. Feedback from the participants reinforces the importance of a number of principles. First, whatever the content, if participants do not see the immediate relevance of the subject, it is neither well received nor well remembered. Participants say these topics are "boring." Whenever participants used this word, they were referring primarily to in-school topics where relevance was questionable. In response to the question about what kinds of things should be covered in the in-school component, Nancy provided an insightful response:

> Probably things you'd use right away. Like the mock interviews and stuff because half the people there probably didn't even have jobs. Now because they're a year older or whatever they do and it was a good thing they practised their interview and read the résumé; because it was practised you remember it for later on. It's

> not good if you learn things for like university and stuff cause that's years down the road when we started and you probably wouldn't remember half that so I think it's a good thing for right now. Cause you'll always use that again.

In listening to the participants, it often became apparent that they did not see the relevance of different aspects of the in-school component, even though many adults would take the relevance for granted. Hence, project coordinators need to emphasize why each topic is relevant.

Wherever possible the in-school component should permit personalizing. For example, videotaping job interviews followed by a discussion of the strengths and weaknesses of the interview is vastly superior to an abstract discussion of the do's and don'ts of job interviews.

Another principle, somewhat related to the previous one, is that an active, hands-on format is infinitely better than a passive, pencil-and-paper approach to learning. Both project coordinators and participants agreed that an interactive format, where questions and answers were not the sole prerogative of either party, was more effective than the traditional division between teacher and student. Daniel's in-school experience reinforces this theme. At this site, the in-school component had the fewest number of workshops and was closest to a lecture-style format. To some extent as a consequence of this, Daniel gained little from the in-school component. For him it was just an "easy" course; he liked it only because it had "no tests, no homework."

Finally, a format that provides certification of certain skills helps cement what was learned. Although such certificates may have no official status, they highlight participants' accomplishments and helps them feel proud.

Career choice

At the age of 16 and 17, the post-high school plans of youth are often amorphous and labile. This is especially so for the less popular plans of attending a business school or a trade, technical or community college, or becoming self-employed. For example, less than one fifth of those who mentioned full-time work as their immediate post-high school plan in either Grade 11 or 12 mentioned this as their plan in both years.

The malleability of post-high school plans extends to the choice of future occupations and careers. The basis for students' vision of their futures is frequently not solid. Initial decisions are made on questionable grounds. This manifests itself particularly in the context of youths' work placements. A particularly helpful and supportive work placement supervisor caused some participants to change their minds about what they wanted to become. Even the most unwavering of plans were sometimes erected on clay foundations. One example was a participant whose heart was set on becoming a cardiologist, a dream that was born out of a Grade 6 class in which the teacher made a particularly strong impression. Likewise, an uncle or a cousin who happened to be successful in a particular occupation becomes a role model, without much appreciation of the context or the requirements for his or her success.

The implication of this is that the basis for career choice needs to be addressed as part of the in-school component. The project coordinators need to be sensitized to both the fact that students may change their choice of career and base their choices on limited information. It is easy to overestimate the rational basis of participants' career choices. A well-developed workshop on this topic is warranted.

Workshops

Workshops were especially well received, partly because they did not resemble regular classes, partly because they were often hands-on, partly because some of them gave students certificates. The researchers did not uncover a single instance where a participant claimed to prefer a regular class to a workshop. Indeed, the more that classes were replaced by workshops, the better the participants' reception of the in-school component. How is this revealed? First, as shown in Chapter 4, participants were less satisfied with the number of classes/workshops in those sites that had few workshops. Second, in all sites, workshops were the part of the in-school component that participants saw as most positive, both in the focus groups and in questionnaire responses. Finally, in the strategic interviews, when asked to recall what had been covered in the in-school component, participants consistently mentioned the content of the workshops. The only other topics specifically remembered were writing résumés and preparing for job interviews. The lesson is simple, but often unheeded: organize the in-school component around a workshop format.

Many of the workshops cost money. An organization, such as St. John's Ambulance, charges a fee to deliver the First Aid/CPR workshop. But these workshops were so universally popular in the NSSWT program that very strong grounds would have to exist to remove them from the in-school component. Nevertheless, the question must be asked, in what ways do each of the standard workshops (WHMIS, First Aid/CPR, food handlers) contribute to the goals of school-to-work transition? It is important that the relevance to the goals of the program be clear to students, parents and other educators in the school.

Marks

An analysis of the marks obtained by students in the NSSWT program revealed that they were consistently higher than the marks obtained in other subjects, such as English and mathematics. Further, participants seldom experienced SWT11 or SWT12 as more difficult than their other courses, and often reported these courses to be easier. This raises the danger that, in the future, students might apply to the program to avoid, rather than to prepare for, work. Not only were the average marks in the NSSWT courses high, they were clustered together. That is, the marks tended to be both high and undifferentiated. The exact opposite is required: the marks need to be lower and the variation among them higher. Otherwise, the program loses credibility and weakens the link between participant performance and mark earned. This is not to argue that the more difficult the program, the better. If the program is perceived as being too difficult, students will avoid it. Programs such as NSSWT need to be careful that they do not develop a reputation for being considerably easier than other courses, or being considerably harder.

Instructors

Three of the project coordinators in the NSSWT program held a teaching licence; three did not. Should project coordinators be teachers? One could mount convincing arguments for both sides. On the affirmative side, teachers have experience dealing with students; they have mastery over the principles of teaching and learning, and they are more likely to have the confidence and cooperation of other teachers. On the other side, the evidence clearly shows that the less similarity the in-school component has with regular classroom teaching, the better it is received. Teachers may bring the traditional methods to school-to-work-transition programs, which would not serve such programs well. Likewise, teachers are not chosen for their familiarity with the business world, nor the local community. Knowledge of these things would help bring the in-school component to life with relevant information, local applications and appropriate guest speakers from the business world.

Nevertheless, the in-school component was consistently better received in sites where the project coordinator was a teacher. Participants endorsed all aspects of the in-school component except the school's support of the program, more in those sites where the project coordinator was a teacher. On this basis alone, it is advisable to have teachers in charge of school-to-work programs. Another ground is the greater communication between school staff and project coordinators.

By their very nature, school-to-work transition programs need to make links between school, work and community. Where the project coordinator is located is of practical and symbolic importance. The research reported here shows, not unexpectedly, that links with educators become stronger when the project coordinator is housed in the school. Conversely, there is some reason to believe that links with employers and the community are enhanced when the project coordinator is housed outside the school premises. Both links are important and their relative importance in a given context should be weighed. So, if the project coordinator is not a teacher, the program might be better served if this position is housed within the school.

Guidance services

Both participants and comparison students reported that they seldom used the schools' career-guidance services. Indeed, they often did not know what services their schools actually provided. Such services may or may not be sufficient, but in many respects that is irrelevant since they are not likely to be used anyway. Invariably participants liked, and found useful, the career services that were part of the NSSWT program, including the in-school component. The lesson to be learned from this is that career-guidance services must be proactive. To be effective, career guidance must be packaged in something like a school-to-work-transition program. When part of such a program, its relevance is obvious to the participants.

Work experience component

Monitoring work placements

Both parents and coordinators commented on the importance of monitoring the work placement to ensure there are no problems. A variety of ways of monitoring work placements was used in the different sites, and in different years at the same site.

The procedure that worked best, however, is the one described in this section. Among other things, it produced the greatest congruence between the work placement and the intended future occupation. The first step consists of a meeting between the project coordinator and the employer to describe the program briefly and, in the words of the Pictou project coordinator, "to get them to commit to taking a student on." This project coordinator described the second meeting as one "just to see if the personalities will meld and that the employers are comfortable and that the student understands what their hours are, what the dress is and what kinds of things they'll be doing there."

It is in the third visit that the training plan is developed:

> I have a meeting with them after that to do a training plan after the student has been there about a week usually. And the reason I wait some time before I go is so that the employer will know what level the student is at before they start talking about skills that the student is going to develop. It's nice to know what kind of personality you have beforehand. And so we get in and we meet. Usually the employers have a lot of difficulty stating what skills are at their place, I find. I have to pull it out and, and really think about and that's why it's good for me to have been there three times 'cause then I have an idea of what happens there too. So I can say "well, will they be doing this, will they be doing this, will they be doing this" and then they'll agree. Some employers are very good at it and give you a list in a very short time, some aren't.

Continuing placements

With more than one work placement (as there was in the current two-year program), a further issue is whether the second placement should continue from the first. In the design of the NSSWT program, it was of paramount importance that the work placements give participants the opportunity to get first-hand experience working in a job with potential and one in which they would have the opportunity to develop generic skills. It was felt that keeping the same work placement would best serve these objectives, since it would take a while to get acquainted with the work setting and become comfortable with the particular work environment. The workload for the project coordinator is also reduced when placements continue. These factors argue in favour of keeping the same work placement.

On the other hand, experience showed that many participants desired diverse work experiences. Sometimes that came about because the tasks assigned to them were too repetitive. Other times it was because they either formulated plans or changed their minds about their expected future career, and wanted a placement congruent with their new aspirations. Some project coordinators also argued that placements should provide work experience in a setting other than the one they are likely to hold in the future, precisely so they can appreciate what work is like in other settings. Such experiences may be valuable in developing group problem-solving and teamwork skills that need input from divergent settings.

If a school district opts for a two-year program with more than one work placement, these counter-balancing arguments suggest there should be flexibility in the work placements so that some students will have continuous work placements while others take on new ones.

Work experience setting

The institutional setting of the work experience component is probably as important as the actual job. That is, similarity in the job environment with that anticipated in the future is often sufficient to make a work placement a good learning experience.

For example, placing an aspiring surgeon at the information desk or the cafeteria of a hospital lets them get a "feel" for the workplace. Likewise, to photocopy documents and answer the telephone in a law office enables the budding lawyer to get a sense of the work routine and corporate culture of a law firm. This seems to be particularly the case for students who wish to enter a profession, and overcomes a severe confidentiality/privacy issue for such placements.

Other work experience programs

Both employers and educators expressed concerns about potential overlap between the NSSWT program and other work experience programs, such as co-op. In areas such as Halifax, where there was a strong and active co-op program, it was unclear to many of the stakeholders (including students and their parents) how the NSSWT program differed from co-op. What is more, educators and employers expressed concern about potential conflicts between the two programs in terms of access to limited work placements. It is clear that any school-to-work-transition program needs to ensure that it is not seen by either employers or the school as undermining existing work experience programs such as co-op.

Paid jobs

Given the emphasis on preparing for the work world, it is understandable that many students believed that participation in the NSSWT program would help them find a job during or after their schooling. It is important that any promotion of the program be up front and unequivocal about the realistic chances for ongoing employment as a result of taking part in the program.

The NSSWT program design called for employers to either pay participants or contribute an honorarium. The assumption was that both participants and employers would become more committed to the program and have higher expectations of the work experience if money was involved. On the other hand, many employers clearly stated that payment would be a barrier to their participation. Additionally, project coordinators felt that they would not be able to have a sufficient number of potential placements if employers were required to pay. Since it is crucial to have appropriate work placements, it may be necessary to explore other arrangements.

A high proportion of high school students have paid jobs. So did participants during the time they were in the NSSWT program. The fact that payment was a problem in some sites created a work placement dynamic that was unfortunate, pitting immediate gains against potential long-term benefits. It seems that financial considerations were so strong that some participants chose work placements on the basis of it becoming a paid job rather than its fit with their occupational interests or the opportunity presented to develop generic skills.

This dynamic came to light during the third year, when it was noticed that a substantial percentage of participants (57%) changed employers with their second placement. It was also noted that in some sites a large minority of participants were in jobs that did not seem congruent with their anticipated future jobs. When asked about this, some of the project coordinators indicated that monetary pressures were the reason. Given the time constraints on Grade 12 students in particular, their decision to opt for placements that could become paid jobs is eminently understandable. From the perspective of the program, however, this limits the likelihood of realizing program goals.

The practice in Yarmouth of having participants find their own second work placement at first glance appears admirable. However, it was probably expecting too much from them to obtain appropriate work placements on their own. The project coordinator needs to pave the way with the employer.

Connecting with partners

Introducing innovation heightens the need for accurate and timely information. If this need is unmet, then information will be "improvised," resulting in misinformation. This was evident during the second year of the program, when various people "knew" that NSSWT was targeting only the very bright or only those who were not planning to continue their education beyond high school, even though neither was the case. When the NSSWT program was introduced, there was not enough time to properly disseminate information. It is important that timely, accurate information be provided to students, parents and other educators in the school over the course of the entire program, from launch to completion.

Connecting with parents

Two facts emerged about parents that need to be examined. The first is that parents, on the whole, supported the NSSWT program and its objectives. The second is that parents felt unqualified to help guide their children's career or future job choice. A not unreasonable conclusion is that if project coordinators were to consult with parents about work placements, parents would, in turn, reinforce school-to-work-transition efforts congruent with the best understandings of the participant and the project coordinator.

An important lesson learned from the NSSWT program is that greater efforts must be expended to get parents involved. In all sites parents were invited, usually by way of a school bulletin or a form letter given to the participant, to meet with the project coordinator. In addition, project coordinators made a standing invitation to parents to contact them at any time. The response was varied and spotty. In some sites, one or both parents of almost all participants came to the initial meeting; in others few did. The information obtained from the case studies, the questionnaires and the interviews consistently indicated that parents wanted to be more involved. School-to-work-transition programs need to involve parents more, since parents are much better placed than project coordinators to provide the supportive environment and encouragement that will facilitate appropriate transitions.

What form might greater parental involvement take? One possibility is to focus the involvement around the work placement. Parents took great interest in the placements obtained for their child, and sometimes expressed dissatisfaction with the choice, or the process. It would be appropriate for project coordinators to discuss the possible placements, their reasoning and their concerns with the parents prior to the placement. Perhaps halfway through the placement, a follow-up telephone conversation could be made to discuss the progress. There is little doubt that parents would respond positively to such an approach.

With respect to occupational plans, parents play a key role: they take an active interest in their children and support their goals and aspirations. They would like to play an even greater role, and school-to-work-transition programs should take advantage of this. When project coordinators discuss work placements, post-high school plans and career possibilities with parents as well as the participants, their help is automatically enlisted.

Connecting with the community

One of the key design features of the NSSWT program was a strong local management committee with representatives from a variety of stakeholders. Several sites, such as Amherst and Yarmouth, developed partnerships in the process of writing their NSSWT program proposal. Others, like Truro, capitalized on existing partnerships. In all sites, though, partnerships did not grow to the extent the program designers envisaged. To become truly viable, partnerships must develop a sustaining structure, rather than rely on individual energy. Partnerships need to extend beyond particular programs, or particular project coordinators or particular individuals. The structure could be a local management committee with routinely scheduled meetings at an agreed-upon time.

The implementation in all sites started with what appeared to be active and healthy local management committees. Although the structure and composition of these committees augured well for the vitality of multiple inputs to the program, they did not function well except in one site, Yarmouth. The project coordinator in that site was not a teacher, was active in the community and was accustomed to working with advisory committees. But the same could be said about the project coordinator in Sydney, yet the local management committee there was not used to maximum advantage.

What became apparent in the course of the program was that project coordinators felt they really only needed the local management committee in the start-up phase. This, in retrospect, constituted a weakness in the NSSWT program management. The program would have benefited from greater involvement of the local management committee in the ongoing delivery of the program. It could have been instrumental in solidifying partnerships with parents, employers and community.

Why did the local management committees become dormant in most sites? The immediate reason was that project coordinators did not see their importance. The underlying reason may well be that project coordinators claimed, rightfully, ownership of the program at their site. They may have wanted to retain control, and felt, wrongly, that an active committee would threaten such control. The lesson learned is that project coordinators need to be shown the benefits of local management committees, and how to use such committees to their benefit. Community-based programs in Canada have long recognized the indispensable role of supervisory committees for any project. School-to-work transition programs could emulate their record.

It is clear from comments from parents, educators and employers that it is important to have ongoing, active local management committees during the design, implementation and maintenance of the program.

It seems clear that, given the need for community support in the provision of work placements and in the filling of positions on local management committees that such a program must be sensitive to the needs of the local community.

Connecting with employers

All of the project coordinators were in agreement that, although employers were very committed to the NSSWT program, approaching them requires careful management. One project coordinator noted, when asked what lessons had been learned over the course of the three years of the program, that:

> One thing I've learned is probably how you approach employers better. Coming from their perspective more, learn to talk their talk I guess. They want you in there very quickly, they don't want a long song and dance, they want things in point form and they want to know what is expected of them and they want all that done perfectly because they basically don't have a lot of time to deal with you. So I've learned how to do that and that's a good lesson.

Nevertheless, it is clear that there are a number of employers, in a range of private and public organizations, who are interested in taking the time to develop partnerships with schools. One form this interest takes is their willingness to provide work experience for students in programs like NSSWT. Other school-to-work transition programs can build on this wide base of employer support.

Connecting with teachers

As was true with other partners, it is important to ensure that teachers are actively involved in any school-to-work transition program, as members of vibrant local management committees. It is also important to have ongoing information provided to teachers less directly involved in the program, so that they do not undermine its effectiveness.

A case could also be made for incorporating the type of reflective learning encouraged in the in-school component, in more of the regular curriculum. Certainly, students seemed to respond well to this style of learning.

The concerns raised by teachers not directly involved with the program highlight the importance of relevant in-services and internships for teachers if there is to be an expectation of developing stronger partnerships between schools and the wider community.

Growth potential

Growth of work experience programs such as NSSWT is limited by three factors: the demand from interested and qualified students, the supply of employers or agencies offering appropriate placements; and the human and financial resources required to implement such programs.

Demand

Some provinces, such as British Columbia, have introduced a compulsory work experience component into the high school curriculum, based on the belief that all high school students could benefit from such an experience. It is assumed that school-to-work transition programs in Nova Scotia, however, will remain voluntary. The question then is, how much demand would be generated by such a program? The answer hinges to a large extent on what kind of a program it is (e.g. with paid or unpaid placements) and on its reputation. Even in its short history, there are strong indications that the demand is a function of the nature of the program and its reputation. For example, the Pictou implementation had the well-deserved reputation of being a solid program. It is difficult to believe that the high number of applications received in that site is merely a coincidence.

The number of applicants to the NSSWT program in each of the six sites was fairly constant between the two cohorts. On average, the number of applicants was not quite double the number that could be accepted into the program.

Supply

The available evidence, although quite spotty, suggests that under certain conditions many employers would be willing to provide appropriate placements and to be involved in other ways in school-to-work programs. In this connection, surveys of employers conducted in Truro and Yarmouth should be mentioned. These revealed impressive employer support. For example, 87 percent of Truro businesses expressed interest in participating in a school-to-work program, as did 76 percent of Yarmouth businesses.

In the final year of the NSSWT program, finding placements for participants took very little of the project coordinators' time. This indicates that expanding the number of placements beyond the levels of the NSSWT program at the six sites should be quite feasible. The question is, how much can it be expanded?

Based on the experience of the NSSWT program, for most businesses, willingness to place students depends on financial considerations. Small businesses, in particular, felt unable to pay students, and if they were required to do so they would not be in a position to accept a placement. The issue of compensation was addressed previously; suffice it to say here that sufficient good will on the part of employers exists to suggest expansion of supply to about double the current levels in most of the sites.

The ongoing challenge

As mathematical economists know only too well, it is impossible to maximize all functions simultaneously. The pursuit of one feature entails forfeiting other desirable features. What this means for school-to-work-transition programs is that compromises have to be made on many issues. For example, to maximize work placements requires that placements occur during regular business hours. But that would often mean having participants miss classes. Missing classes jeopardizes, or at least is perceived to jeopardize, participants' academic performance. Poorer academic performance lowers the chances of admission to a university program of their choice. Designing program features with the appropriate balances and creative solutions to such dilemmas is the challenge.

A major puzzle that remains after all the analyses are done is the disjuncture between how participants feel about the program and what measurable effects it had on their lives. Particularly in the personal interviews, the program received almost unanimously glowing reports. Participants often described the program in terms of how it contrasted with the rest of their high school experience. They were tired of high school, irritated with not being treated as adults, chafed at what seemed to them unreasonable rules and bored with the content of their classes. In contrast, they described the NSSWT program as one in which they felt they grew personally, were treated and respected as adults, and were given responsibilities and challenges on which they thrived.

The parents also remarked about the changes they saw in their children – positive changes that they attributed specifically to their participation in the NSSWT program. They saw increased self-confidence and a greater sense of personal responsibility, for example.

Yet, at the end of it all, few concrete differences that one might expect on the basis of this enthusiastic reception could be found. There were no differences between participants and comparison students in reported levels of various skills; no differences in the extent to which they reported liking school; no difference in reported levels of self-confidence.

These results reinforce the importance of the earlier comment that one should not expect too much of a single program. It also highlights the key role played by the research component. Without systematic information from a comparison group, and without data from different sources and different points in time, quite different conclusions might have been reached. Specifically, had analysts relied solely on the reports of participants who completed the program (and/or their parents and employers), glowing enthusiasm for the program would have suggested much stronger program effects than were actually documented. The lesson learned here is the need for systematic, longitudinal research with a comparison group for reliable program evaluation.

Nevertheless, there were lessons learned about the ways that this research process could be improved.

Role of research

The research component played several important roles that contributed to effective implementation. First, it provided opportunities for relatively quick corrective action. For example, the desire to increase the number of workshops, reduce the lecture-style format and increase communication with parents became apparent as a result of the first-year case studies. Additionally, a variety of sources of participant dissatisfaction, such as delays in work placement, were uncovered and discussed with the project coordinators. In this way, research can inform and improve the program delivery, as well as program assessment.

Further, the very fact of the heavy research emphasis had the symbolic effect of making both the project coordinators and the participants aware that they were engaged in something important. As two project coordinators noted:

> When I came to the table for this project I was very impressed with the level of research because I had done projects for probably eight years in my community development role, for which people gave me untold amounts of money and never once questioned how it was spent. And so we would do projects and they would be really good projects and we'd have all kinds of really good results and nobody would care. And so this time I thought, we're going to get some caring going on here. People are actually going to care what happens.
>
> I was really impressed. I used to, the first year, leave little things out just to see how fine tuned (the researchers) were, if they were going to call to ask for stuff. But to be honest, it's been a really, really interesting experience for me. It's the one that, the research, I had no idea. The research was like something somebody did in the lab, to me. That was my interpretation of research, and this has been an eye-opener and a really interesting, good and valuable experience. Frustrating at times, certainly but I think most things that are good tend to be frustrating.

Finally, the survey instruments, especially a shortened version of the initial student questionnaire, could serve a useful purpose. It could be filled out as part of the application procedure. This questionnaire asks about current career choice, previous work experience, expectations of the program and post-high school plans, among other topics. Project coordinators would be in a much better position to anticipate required work placements, for example, by having such information in advance.

The NSSWT project was designed from the beginning to be both an intervention program and a research project. The research component was particularly intensive and, in some respects, intrusive. This presented both challenges and opportunities. The challenges took the form of getting the practitioners to understand and appreciate the research requirements. A lesson learned quite early was that research procedures and requirements need to be clearly described to project coordinators and participants, together with opportunities to discuss these requirements.

Another lesson learned was that each item of information to be gathered needs to be carefully assessed for its importance, since the research demands can quickly become burdensome to participants. The initial questionnaires, for example, were too long and the researchers resisted shortening them to the extent desired by the project coordinators and participants. Here is how one project coordinator phrased it:

> Well, I just felt, and I still feel, … that the program's gotta come first, gotta answer to the kids first and then everything else will fall in place. And, we put the cart before the horse too many times, and that's why I thought we didn't get off to a right start.
>
> My biggest concern in the beginning and I think this changed as the program went along, well I know it changed, my first year I felt like the research was being put above the program. And my concern was that good research is good only if you have good programs that you're researching. And I felt like it was us against you guys (the researchers) actually, for a long time. But then, I think by the end of the first year, and once we met people and there seemed to be some understanding on (the researchers') part that, hey, we had programs and that was our primary concern, I think the research got better.

Researchers need to be able to compromise on some issues and to explain why compromise is not possible on others. In this project, for example, it would not have been possible to compromise on random assignment without jeopardizing research integrity, but it would have been possible to compromise on which questionnaire items were candidates for deletion.

When research accompanies practice, both researchers and practitioners must appreciate, and be committed to, the challenges of the other. In the first year, the project coordinators at times saw the research component as an unwelcome nuisance. Some of the researchers, in turn, worried that the research imperatives, such as random assignment, were being sabotaged at some of the sites. Open communication between researchers and practitioners, with a willingness to compromise on both sides, is required, as is a recognition that certain compromises are counter-productive. Once the project coordinators understood why random assignment was crucial, they seemed quite willing to forego accepting only their "best" students for the program. On the researchers' side, once the project coordinators made clear how awkward it was to approach employers and supervisors repeatedly to ask them to fill out a questionnaire, the research team found alternate ways to obtain some of the information, such as using fewer and shorter questionnaires.

In this project, there were many data sources: questionnaires from students and parents, official school records, focus groups, skills tests, questionnaires, training plans and evaluations completed by employers and supervisors, strategic interviews and ongoing discussions with project coordinators. There was a danger of reducing cooperation if too much information of a similar type was asked of the same person. On the other hand, one source of data might not provide all the details needed. For example, the supervisor's questionnaire was kept deliberately short, assuming the relevant information could be obtained from the training plans. However, not all sites used the same training plan in the first year. It is clear that careful coordination of all parts of the process is needed to ensure relevant information is obtained with little duplication.

An important source of information about the effectiveness of the program comes from an analysis of those who failed to complete it. To undertake the detailed attrition analysis presented in the chapter on student outcomes, it was necessary to have data from students after they had left the program. This was complicated by the fact that it was not always clear when particular students had "left." There was also the issue of getting information on why they had left. To fully evaluate a program such as NSSWT, it is important to have a clear set of records that can identify who is and is not participating at any particular point, as well as a system to track those who leave.

In summary, research that can provide a solid basis for policy recommendations ideally includes:

- longitudinal data from multiple sources;
- detailed information on school and non-school experiences, as well as on student plans and attainments; and
- a carefully controlled comparison group.

Ideally, such research would also include a longer term follow-up than was possible in this case. It is difficult to evaluate the effect of a program on outcomes if only one year has elapsed.

Despite this time limitation, it is clear that the current research provides a wealth of relevant data on this particular school-to-work-transition program. This information not only helped improve program delivery, it provided the basis for the many "lessons learned" that are highlighted in this chapter. These lessons are captured in the following recommendations.

Summary of recommendations

General

- A school-to-work program cannot be justified solely on the basis of anticipated development of transferable skills.
- Information on post-secondary education in general, and university education in particular, needs to be taken into account in the design of any high school program such as NSSWT.
- Future programs need to pay greater attention to developing problem-solving skills.
- Programs such as NSSWT need to be careful that they do not develop a reputation for being considerably easier than other courses, or being considerably harder.
- It is important that neither the in-school nor the work experience components interfere, nor be seen to interfere, with other parts of the students' schooling. In particular, school-to-work programs should minimize the number of classes and the amount of time that participants miss.
- Program designers need to be sensitive to the different needs and the different futures facing young women and young men to ensure that the school-to-work program meets everyone's needs.
- Such a program must be sensitive to the needs of the local community.
- It is important to have teachers in charge of school-to-work programs. If the project coordinator is not a teacher, the program might be better served if this position is housed within the school.

- The ideal structure seems to be to have a one-year program with core topics for the in-school component beginning in Grade 10. The work placement, coupled with reflective learning opportunities, would occur either in the summer or in Grade 11.
- It is important to include practices that foster a strong group identity and that give students a sense of taking part in something extraordinary.

Design considerations

- Timely, accurate information must be provided to students, parents and other educators in the school over the course of the entire program from launch through to completion.
- It is important to ensure that any school-to-work-transition program attracts those who would benefit most from it.
- It is also important to control the number of admissions, since appropriate work placements must be found for each participant.
- When admitting students to the program, a simple random assignment selection procedure should be used.
- It is important that any promotion of the program be up front and unequivocal about the realistic chances for ongoing employment as a result of taking part in the program.

In-school component

- Wherever possible, the in-school component should permit personalizing.
- An active hands-on format is better than a passive, pencil-and-paper approach to learning, preferably a format that provides certification of certain skills to help concretize what was learned. This can be most easily accomplished if the in-school component is organized around a workshop format.
- If there are multiple sites, it is recommended that there be a common core content that would be covered in all sites, and an elective site-specific content.
- The basis for career choice needs to be addressed as part of the in-school component.

Work placements

- It is critical to monitor the work placements to ensure there are no problems.
- There should be flexibility in the work placements so that some students will have continuous work placements while others take on new ones.
- It may be necessary to explore arrangements other than paying the student in the work experience component.
- Any school-to-work transition program needs to ensure that it does not become seen by either employers or the school as undermining existing work experience programs such as co-op.

Partnerships

- Considerable effort must be expended to get parents involved.
- Partnerships must develop a sustaining structure, rather than rely on individual energy.
- Project coordinators need to be shown the benefits of local management committees and how to use such committees to their benefit.
- It is important to have ongoing information provided to teachers, who are not directly involved in the program, so that they can enhance its effectiveness.
- Relevant in-services and internships for teachers are important if there is to be a development of stronger partnerships between schools and the wider community.

Other recommendations

- The challenge for future school-to-work-transition programs is to increase the opportunity for participants to practise adult roles, while providing the necessary support and structure young people need.
- Career guidance services must be proactive. To be effective, career guidance must be packaged in something like a school-to-work transition program.

Role of research

- Any such program, when first initiated, needs systematic longitudinal research, with a comparison group for reliable program evaluation.
- Research can inform and improve the program delivery, as well as its evaluation.
- A shortened version of the initial student questionnaire could serve a useful purpose as part of the application procedure.
- Open communication between researchers and practitioners, with willingness to compromise on both sides, is required, as is a recognition that certain compromises are counter-productive.
- Research procedures and requirements need to be clearly described to project coordinators and participants, together with opportunities to discuss these requirements.
- Given the many demands on the various stakeholders in the program delivery, each item of information to be gathered as part of the research needs to be carefully assessed for its importance. Careful coordination of all parts of the process is needed to ensure relevant information is obtained with little duplication.
- It is important to have a clear set of records that can identify who is, and is not, participating at any particular point, as well as a system to track those who leave.
- Research that can provide a solid basis for policy recommendations would ideally include:
  - longitudinal data from multiple sources;
  - detailed information on school and non-school experiences, as well as on student plans and attainments;
  - a carefully controlled comparison group; and
  - a longer term follow-up of more than a year.

CONCLUSION

School-to-work transition programs developed out of a recognition that youth transitions from high school are becoming more complex. The labour market that youth are entering is undergoing profound modifications. The types of jobs available are changing, as are the educational and skill requirements to move into different occupations. The markers of adulthood (completing one's schooling, moving out of the parental home, getting a job, getting married, having children) are becoming less clear as educational expectations and attainments rise, permanent job entry is delayed and students move in and out of the parental home.

Given these shifts, traditional methods of preparing youth for the world beyond high school are becoming less relevant. Provincial and federal governments in Canada and elsewhere have responded by providing a variety of programs to ease these transitions for young people. The majority of these programs focus on the students themselves, and the ways they can better prepare themselves for the changing world into which they are moving. The NSSWT program is one such program, one that was premised on the belief in the superiority of work-based learning over traditional classroom learning. Although some evidence bolsters this belief, a more appropriate conclusion from the Nova Scotia experience is that work-based learning has the potential to be superior, a potential not necessarily actualized.

This raises the more general question of whether the investment in a school-to-work program is warranted. Given the limited resources available to most schools, and the many competing demands for these resources, this becomes a central issue. What evidence is there that the NSSWT was worth the time and money invested?

The issues

In trying to put a perspective on the program, several issues broader than the specific objectives that were devised for the program need to be considered. The first is that a university education is not necessarily for everybody; multiple transition-to-work pathways are desirable. A second is that high school completion is desirable for most if not all students, otherwise their future prospects are seriously limited. However, these two facts are nothing new.

If one takes seriously the changes that have taken place in the last two decades, it is clear that traditional school-to-work approaches, such as vocational education, are likely to fall short of the mark. Adaptability to change becomes more necessary, and this requires both transferable, generic skills and an awareness of the skills one has, once they are developed. Students venturing into non-traditional fields need to be made aware of the challenges they will face, as well as the supports available to them.

The changing requirements of the occupational world young people face argue against a too-rigid or firm career plan. As youth move from high school to post-secondary institutions, it is important that they keep their options open, while avoiding potentially paralyzing uncertainty. Many combine paid work, volunteer work, schooling and household responsibilities. They need time management skills in order to juggle these demands on their time. They also need the ability to deal with the tensions and conflicts these multiple demands create.

With prolonged education, young people find themselves dependent on parents and other adults until they are well past the age when they would expect to be independent. Many experience mixed messages when they are treated as adults in some settings (such as work), but more like children in others (such as school or at home), where they are still seen as dependants living under the parental roof.

A program that expects to prepare students for their time beyond high school needs to recognize not only the traditional challenges facing youth in this transition, but also the new realities facing young people at the turn of the millennium. Clearly, no one program can hope to prepare all young people for all the eventualities they will face. Did the parameters, design and implementation of the NSSWT program strike the appropriate balance?

On the right track

Taking these issues into account puts the NSSWT program in a somewhat different light. Perhaps the most important conclusion is that the NSSWT program was on the right track, even if the immediate outcomes are not overly impressive.

It was the right approach to take for several reasons. The program was on the right track in that it attracted and took in students who were disproportionately from somewhat less privileged backgrounds. Despite the fact that these students were beginning to show signs that schools were failing them, the program helped them to complete high school.

The program was on the right track because it transformed the high school experience for many of the participants. Repeatedly, they drew an invidious contrast between "the school" and "the program." The school for some became something they had to endure; something experienced as boring, irrelevant; it had become a place where they seldom felt they were treated as adults. The program for most was something to look forward to, and a relief from the apparent meaninglessness of school. Of special significance in this respect is the retrospective viewpoint of participants. A year after completing Grade 12, the participants judged their high school program as having prepared them much better for their subsequent transitions than did the comparison students. Any program that students experience as relevant and useful is, on those grounds alone, a success.

The program was on the right track because it encouraged students to consider post-secondary pathways other than university. Because of that, it also made them consider careers other than the usual professional ones, to which most young people initially aspire. In many respects, a crucial transition challenge for society is precisely the one of successfully channeling the overabundance of initial aspirants to the professions (and its associated university pathway) into fulfilling careers that become possible through other post-secondary pathways.

The NSSWT program was on the right track because it cut through the vicious cycle where youth cannot get a job without appropriate prior experience, but they cannot get such experience without getting a job. The program had little difficulty getting employers to provide appropriate work experience for the participants. A main reason was that the risk employers take hiring young people who are sponsored by the program is reduced. Employers could discuss with the project coordinators potential or actual difficulties that might arise with a given participant.

The program was on the right track in that it succeeded in providing participants with meaningful exposure to work in environments that for many of them approximated the ones in which they expected to work in the future. Participants' satisfaction with the NSSWT program was to a large extent attributable to the types of work experience they obtained through the program. The work placements were often of the "assistant" kind. Participants assisted veterinarians, mechanics, lawyers, building inspectors, teachers, foresters and so on. Such settings were markedly different from the typical work experience young people could obtain on their own, usually in retail and services areas. They permitted a greater variety of skills to be practised; they provided an opportunity for the students to become acquainted with the problems, and their solutions, that typically occur in the work environments associated with a chosen career.

The program was on the right track in that the reflective learning encouraged during the in-school component in most of the sites helped students identify both their strengths and their weaknesses. Discussions about workplace conflict and how to handle them prepared them for difficult situations. Creating personal portfolios to document the skills they had achieved allowed them to recognize the abilities they already had. Discussions in the workshops encouraged them to think through how and where they could develop additional skills that they felt they needed. These exercises will be invaluable in their paid work and in other realms of their lives.

Not far enough?

Although the program was on the right track, it did not move far enough along it. What would the program have had to do to better prepare these students for the future they are facing?

Any program that purports to be preparing students for the years immediately after high school needs to recognize that most want and expect to attend some form of post-secondary institution. What is more, most in fact do attend some such institution. Few go directly into the labour market on a full-time basis. Transition programs need to include components that explicitly prepare youth for advanced education, and which target long-term as well as immediate occupational goals. While the NSSWT program did this to some extent, given its focus on transitions to work, it did so only indirectly.

Few of the participants reported that the program had helped them develop skills that they needed to do well in their post-secondary program; more felt it had provided skills for work. An explicit recognition of post-secondary education as a frequent intermediary stage in the transition to work would necessitate more discussion of post-secondary issues in the in-school component. Only two of the sites (Amherst and especially Sydney) reported such a focus in the in-school component. Having students and representatives from different post-secondary institutions in the area, rather than just business representatives, come and meet with the high school students would be useful. Visits to local institutions would complement these talks. Discussions of entrance requirements, study habits, time management, financing of post-secondary education and job opportunities for graduates are topics that could be pursued more.

The NSSWT program was on the right track when it invited representatives from community colleges to participate in the early stages of the program design. It did not go far enough since a working relationship between the program and the community colleges was not solidified. In the United States, formal partnerships between school-to-work transition programs and community colleges have evolved. Known as "2+2" programs, they link the final two years of high school with two-year college programs. The intent of these links is to make the college path more visible and more attractive. In the Nova Scotia context, it could take the form of giving NSSWT program participants preferential admission into specific community college programs on the basis of relevant work placements.

It is likely that there would be broader support for the program from other educators in the schools if it was clear that the program did not impede preparation for post-secondary education. Most teachers, after all, see themselves as preparing students for the next stage of education. With broader support, some of the links to other courses could be stronger.

Beyond the fact that most of these students are moving on to post-secondary institutions, the reality is that they are facing other complexities unknown to many of those in earlier cohorts. With the traditional markers of adulthood becoming more blurred, these young people need to work through ways of claiming adult status. They need assistance in recognizing the new challenges they face and the options at their disposal. While it is unrealistic to expect any one program to prepare students for "life," all programs need to recognize that these youth have to balance work and school and have to work through a variety of relationships while living under the parental roof. Gender roles and the challenges they can create in work, education and relationships warrant attention in a program that purports to prepare students for the future.

In line with the recognition that few students move directly into full-time work immediately after high school, it is important to focus on generic rather than specific skills. While this focus was part of the intent of the NSSWT program, it was less present in the actual implementations.

The heavy time commitment to the work experience component had various implications for skill development. On the one hand, it meant that those skills that can only be developed through practice and experience were being encouraged. On the other hand, it also meant that there was less time available for additional workshops or other learning experiences that could focus more on these generic skills. There are questions about whether two lengthy work experience placements were needed to develop these generic skills. Even in a one-year program, serious attention needs to be given about the length of time in the workplace needed to fulfil the program objectives. Easing the time commitments would reduce the problems faced by many students as they try to balance the demands of this course with other, university preparatory ones, and would remove part of the source of tension with other teachers.

The program was on the right track when it emphasized the importance of partnerships, especially between employers and schools. It needed to have considered at greater length the specific mechanisms that would foster such partnership. The local management committees constitute one such possible mechanism. To become an effective mechanism, project coordinators need to know how to use and benefit from them. In retrospect, it is now clear that workshops for project coordinators on this topic would have been warranted.

Project coordinators consistently praised employers for their cooperation with the program. Employers were exemplary with respect to providing work placements, supervising and evaluating participants' performance. The program needs to involve employers more in other respects, such as active participation on the local management committees and in the in-school component in capacities such as commentators on participants' job-interviewing skills.

A large part of the mark assigned to the NSSWT course was given by the employer, evaluating the student's performance at work. While the employer was asked to grade the student on a number of generic skills, the data suggested that employers were loathe to give low marks, in light of their overall satisfaction with the work done. What is more, they are not trained educators. Few employers have much experience grading students in this way; they have little basis for making a comparison, or for saying a particular student's communication or problem-solving skills are high or low. If students with low levels of skills are identified as having high levels, there is no incentive for them or for others to work to develop these skills. What is more, they will feel ill-prepared when they face circumstances that require these skills. So, although the employers became marginally integrated into the schools through their participation in assigning marks, partnerships between the school and employers were not as well developed as they could have been.

This brings the focus back to a crucial implementation issue: counting on individuals versus changing practices and structures. When introducing a new program, success is often initially achieved through the impressive abilities and Herculean efforts of dedicated individuals. This was evident in the NSSWT program. The Pictou implementation, for example, was exemplary in many respects. A major reason was the talent and commitment of the project coordinator. She understood the needs and concerns of both students and employers, and had the knack for introducing appropriate program design features to deal effectively with situations as they arose. Her organizational skills were superb, permitting her to maintain constant communication with the participants and their teachers, employers and parents. Not surprisingly, then, the work placements in Pictou were particularly appropriate; the academic performance of participants was noticeably better than among the comparison students; the post-high school plans seemed suited to the participants' strengths; and it is the only site in which the attrition rate decreased, and substantially so, for the second cohort.

But there is little evidence that the program in Pictou introduced structural changes in such things as the relation between the schools and employers. If the structures are not changed, the sustainability of the program rests on the shaky foundation of a particular individual.

In contrast, the program in Yarmouth managed to move beyond counting on a given individual. This was the site where, after the first year of the program, the project coordinator moved to a different job. Although the program floundered to some extent, as evidenced by the high attrition rate particularly among the second cohort, it was able to continue and is now beginning to flourish. To a large extent, this is due to this site having maintained a very active local management committee. This helped change the nature of the relation between the program and the employers, as well as between the school and the community. In this site, the NSSWT program is built on a more solid foundation than the one in Pictou. The prospect that the school-to-work transition program will be sustained in Yarmouth is high. Overall, the design of the program recognized the importance of changing the structures; the implementations failed to carry out that change sufficiently.

The program was on the right track when it recognized the importance of measuring generic skills. In this connection, it is important to note the limitations of the research tools used in the NSSWT project. The standardized tests that are part of the International Adult Literacy Survey and the American College Testing WorkKeys are not designed to test for the kinds of complex generic skills that would allow students to cope well in a variety of post-high school settings. The many questionnaires that were part of the research helped identify the students' perceptions of how the program had or had not prepared them for post-secondary education and work. However, as documented by this research, their perceptions often failed to match the findings from other information and appeared to be coloured by their overall satisfaction with the program. To assess a program that develops the skills that students need to handle the new complexities they face requires the development of new research tools as well.

Tensions

In the last chapter, some changes that would improve a program such as the NSSWT were recommended. At the same time, there are some tensions built into such a program that need to be recognized.

One of these reflects the fact that although many students move into post-secondary institutions after high school, not all do. Is it realistic to expect a program to prepare students both for a move directly into the labour market as well as to post-secondary institutions? If one adds an emphasis on post-secondary education, one runs the risk of alienating those who feel they cannot or will not follow this path. Ignoring post-secondary paths risks making the program irrelevant for many.

As we have seen, the program was successful in keeping some students in school who might otherwise have dropped out. At least part of this success can be attributed to the fact that in most sites it was unlike other classes. This "difference from school" was clearly seen as an asset for many of the students who stayed with the program. However, there were many who left before completing the program. The "late leavers" in particular were high achievers who seemed less concerned with finding a program unlike their other classes than they were with ensuring that the course did not interfere with their other courses – courses they seemed to enjoy despite their traditional "school-like" mode of delivery.

In other words, what serves the needs of one group may not serve the needs of another. If one recognizes this and tries to target a particular group, one loses some of the benefits of the current program. What is more, once a program becomes defined as for "high achievers" or for "at-risk youth," it changes from a program like the NSSWT which was designed to attract a range of students into yet another specialized program. Careful consideration needs to be given to how best to resolve this tension in any one area.

Many aspects of the NSSWT program (especially if its focus were broadened in the ways suggested above) would make it appropriate for all students. All students would, no doubt, benefit from a focus on generic skill development, knowledge of the complex world of work they are facing, development of clear but flexible plans and enhancement of their self-confidence. Such aspects are currently being integrated, in part, into programs such as *Career and Life Management* and *Creating a Career* – programs that are now part of the required Nova Scotia curriculum. However, such programs lack any substantial work experience component.

Some might conclude that perhaps an actual work experience component is superfluous, pointing to such factors as the lack of measurable skill enhancement and the low proportion making a transition to full-time work directly after high school. The evidence from this project argues against such a conclusion. Although it is true that the work placements did not produce objective skill enhancement superior to that of the comparison group, it had a variety of other positive outcomes. It must be remembered, for example, that the participants started the program with lower self-ratings of their skills. The supervised work placements gave them the necessary self-confidence, so that their self-ratings improved significantly. Although it is also true that the majority of high school students pursue post-secondary education, significant numbers consider making a direct transition to work, and it is important to smooth the transition for those who end up making such a transition. The work placement provides the minimal necessary experience. Further, the work experience component was precisely the reason stucdents were attracted to the program, and it was the work experience that they especially enjoyed. From the personal interviews with the participants, it became clear that the work placement kept some of them from leaving high school altogether. In the role of an employee, the participants were treated as adults, which was an especially important factor for the male participants. Finally, it was the actual work experience that confirmed the career choice for some and made it clear to others that the career they had expected to enter was not suited to them. Without a work experience component, the advantage given to the NSSWT program in being different from traditional school work is lost.

In order to retain the uniqueness that warrants having a separate course or program, the NSSWT program and programs like it should remain voluntary. In such a situation, students with a variety of abilities would choose to apply. If the program retains academic integrity, some participants potentially facing school-to-work transition difficulties will obtain experiences that help them to make appropriate career decisions and improve their transition. For these students, the program is cost-effective in comparison to the "repair shop" model alternative. Repair shop programs are those that try to ameliorate labour market difficulties after the fact – that is, programs targeting youth who have low employability probabilities, such as early school leavers. For the early program leavers, a subsequent, more intensive program is indicated.

Another tension built into the NSSWT program is the underlying assumption that it is wise and desirable to forge stronger links in the school to the world of work. The idea is that a key role of publicly funded schools is to prepare students for a "dramatically changing work environment" and to be "responsive to the needs of the labour market" (Eaton and Boyer, 1995). While many employers and government officials share this view, some teachers, as evidenced in the focus groups, resisted it. On the one hand, those who support this view of schools can point to the diversity of work placements provided under the NSSWT program. "Employers" represented not only the private for-profit sector, but also a variety of governmental and non-governmental not-for-profit organizations. On the other hand, those who wish to implement future school-to-work programs need to be aware of the fact that the diverse stakeholders in the public education system hold diverse views about the appropriate relationships between school and employment, and that there may be resistance, in principle, to such programs.

Finally, there is the tension built into the overall type of approach to the situation. As indicated in Chapter 1, programs such as the NSSWT focus on "supply side" solutions to the issue of preparing students for the world of work. That is, the focus has been on increasing the generic and specific skills that students have, on the assumption that these skills will serve them well in obtaining and in performing the many tasks expected of them in today's labour market. However, the fact remains that increasing the human capital of students will help them get and keep a job only if they displace others – unless the demand for such skilled employees increases. There is not likely to be an increase in the employability of youth unless and until there are more jobs for them to enter. An examination of youth programs in other countries suggests that the worse the economy of a country, the less effect such programs have. Conversely, as the economy improves, so do the apparent positive outcomes of the programs. The tension arises in that it is well within the jurisdiction of governments to implement curriculum changes in the schools or training programs as part of a work preparation program, but governments in capitalist economies have been less free to directly influence the number and types of jobs available. However, without aggressive job creation initiatives, the best a program such as the NSSWT can hope to accomplish is to better prepare students – in the hopes that most will obtain jobs. It can do little for those who lose out in the competition for "jobs with potential."

Sound investment?

The investment analogy in the title of this book invites questions. Should equal investments be made in all youth, or should the investments be more selective? What kinds of returns are expected from the investment and what criteria are to be used for assessing the investments? Who should benefit from them? These are questions not of evidence but of values; their answers depend less on objective facts and figures than on visions of the desirable and commitments to its realization.

The parameters and objectives of the NSSWT program, how these in turn were implemented and the outcomes subsequently achieved, although relevant to these questions, do not determine their answers.

In principle, the NSSWT program was intended to be attractive to all high school students entering Grade 11, although pragmatic eligibility restrictions, such as sufficient maturity to handle the additional workload without jeopardizing high school completion, and attainment of minimum working age, were imposed. In practice, the program succeeded in attracting students from both diverse backgrounds and with varied plans and expectations following their completion of high school. It especially attracted young women but failed to attract many students from visible ethnic minorities. Ironic as it sounds, universal investment may require selective promotions to designated groups such as male, Black and Mi'kmaq students.

Should investment be more extensive for some groups than others? Several intertwined considerations need to be introduced to answer this question. First, the high attrition rates indicate that the program met the needs of some students better than others. Specifically, academically poor performers left the program early, while late leavers carried particularly heavy workloads, obtained exemplary marks and aimed their sights clearly at university. This suggests that the best investment might be to the academically average student. Also supporting this conclusion is the fact that the Pictou proposal indicated it would target this group, and it must be remembered that the program at this site worked particularly well. Before accepting this conclusion, however, several other factors need to be considered.

A second factor is that the consequences of non-investment are greater for some segments of youth than others. Consistently for at least the past quarter-century, the unemployment rate of young people who have not completed high school has been substantially higher than for those of all other educational-attainment levels. Not only that, the employment difficulties of young adults with high school or less education have deepened over that time period, while that of their university-educated counterparts has remained constant.[1] This argues in favour of pitching the program to those most at risk of leaving prior to completing high school. These, it was shown, are the young men.

Although young men are less likely than young women to complete high school, the consequences of their leaving appear to be less severe. For example, the four-year follow-up of the 1991 School Leavers Survey showed that the median weekly earnings of male graduates was $430 while male leavers earned $400. The corresponding figures for females were $336 and $260 for graduates and leavers, respectively (Human Resources Development Canada and Statistics Canada 1998:68). On both a relative and an absolute level, the consequences on earnings for young women who do not complete high school were more severe than among their male counterparts. By these criteria, it is important to make sure that future programs – although perhaps especially promoted among young men – remain attractive to young women.

A good case can be made that the early leavers needed the program the most. This group was in danger of not completing high school; indeed, 3 in 10 left school prior to completing Grade 12 and another 4 in 10 failed to meet all graduation requirements. The available evidence from Canada, the United States and Europe reinforces the conclusion that those most at risk face multiple barriers. To overcome these generally entails more intensive and therefore more costly intervention. Students showing signs of leaving the program (often indicated by skipping classes) require additional help. Should greater efforts to retain those at risk of leaving be made, and what would that require? Can Canada afford to do this? Can Canada afford not to?

Two different approaches could be taken with respect to the early leavers. One approach would be to modify the program in ways that might better serve the needs of the early leavers, thereby enticing them to remain in the program. The other approach is to retain the current focus of the program but to put extra resources and structures in place for the early leavers.

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[1] Labour force survey data show that young people (ages 20-24) holding university degrees experienced an unemployment rate of 8.6 percent in both 1976 and 1995. In sharp contrast, the unemployment rate of young adults having some, or completing high school, rose from 10.3 percent to 18.0 percent during the same time period (figures cited in Giddings, 1996).

The problem with the first approach is that it risks the success of the program as a whole. It cannot be overemphasized that it is imperative that school-to-work transition programs retain academic respectability.

The NSSWT program attracted students whose academic performance varied widely. Although the program disproportionately failed to retain students at the two extremes of performance, it should not be forgotten that many of them remained in, and benefited from, the program. Personal interviews with participants who were struggling academically, and their parents, revealed without doubt that they felt the NSSWT program spelled the difference between a potential failure and a success story.

Return on investment, important as it may be, must be balanced against the question of who should benefit from the investment. As the objectives of the NSSWT program were written, the primary beneficiary was to be the young people themselves. The program was to improve their skills, help them make good career decisions, facilitate their transition to work or further education, among other things. But it is also reasonable to expect the investment to benefit society collectively. A pivotal consideration for government policy has to be the extent of the disparity in life chances of its citizens. In both Canada and the United States, the gap in income between university-educated and those with high school or less has been widening. One of the objectives of the NSSWT program was to help young people complete high school so that they would be eligible for post-secondary education. The program was modestly successful in this respect, and this could ultimately have the consequence of limiting the income disparities for this cohort of students.

In summary

So, what can one conclude about the benefits of a program such as the NSSWT? The research documented modest positive outcomes in a variety of areas. Some may judge the results to be too modest. This would be an unfortunate verdict, since there is a tendency to expect too much from our interventions. The NSSWT program expected that the 300 hours of intervention would produce visible increases in high school completion rates, measurable improvement in a variety of generic skills and smoother transitions from school to work or to further education, to name just a few. The expectations for the NSSWT program were too high.

Is such a program worth the money invested? The answer to that question necessarily depends on the priorities of those making the decisions, and the needs of the local area. Community groups in different areas have different priorities and different levels of resources available to mobilize support for their priorities. Given the complexities of the way educational decisions are made, the worth of such a program cannot be answered just with the data available from the current project.

What the research was able to do was to provide empirically grounded suggestions of best practices that would help make such a program more successful whenever it is offered. In this way, it is hoped that the NSSWT program is able to help students in other jurisdictions prepare for and wisely invest in their futures.

GLOSSARY

1995 Cohort (cohort 1): The group of students who were selected to participate in both the in-school and work experience interventions, as well as the students in the comparison group (who completed questionnaires and skills tests) in the Nova Scotia School-to-Work Transition (NSSWT) research project in the 1995-96 school year.

1996 Cohort (cohort 2): The group of (new) students who became part of the NSSWT research project in the capacity of participants or for comparison purposes for the first time during the 1996-97 school year.

Applicants: All students who expressed interest in the NSSWT program by completing the registration form and who were deemed eligible for the program.

Career Options: A joint 1996 publication of HRDC and the Nova Scotia Department of Education and Culture which was given to each of the project coordinators. It is an occupational handbook that profiles numerous occupations, the possible training paths, occupational requirements, nature of the work and likely employers.

CEC: Cobequid Education Centre is the high school in Truro, Nova Scotia that is participating in the NSSWT project.

CHOICES: a computer program that provides information on careers. The information is tailored to match expressed interests and educational levels.

CNIEC: Central Nova Industry Education Council.

Comparison group: The group that was part of the NSSWT research project but did not receive any intervention (that is, they did not participate in the in-school component nor have a work placement). In some sites, it totally comprised students who applied to participate in the NSSWT program but were not selected to receive the intervention components. In these sites, the selection process was through random assignment. For the 1995 cohort, sufficient numbers of students applied to permit such a procedure in Halifax and Pictou. The same was true for the 1996 cohort, with the addition of Yarmouth as a site where random assignment could be carried out. In other sites, this group is composed totally of students who volunteered to provide some necessary information about themselves to permit a comparison with the participant group. In still other sites, this group is a mixture of volunteers and applicants who were not selected as participants.

CPR: cardiopulmonary resuscitation.

CREDA: The Cumberland Regional Economic Development Association, one of the partners involved in the Amherst implementation.

Early leavers: All dropouts who withdrew from the program within the first year of their participation.

Experimental design: A methodological approach in which random assignment procedures are used to allocate subjects into experimental and control groups. The experimental group receives a treatment or intervention, in contrast to the control group that does not receive any treatment or intervention. Both control and experimental groups are measured before (pre-test) and after (post-test) the administration of the treatment.

Grade-point average (GPA): A summary academic performance indicator consisting of the sum of the final marks received divided by the number of classes taken. In Nova Scotia high schools, possible marks range from 0 to 100, with 50 being the lowest passing mark.

HRDC: Human Resources Development Canada.

Implementation (intervention): The specific in-school and work experience components utilized in a specific site. Although there is one overall school-to-work transition program which adheres to a common set of objectives, parameters and eligibility criteria for the target population, each of the six participating sites developed or adapted its own implementation details felt to be appropriate to that particular site. For details on the objectives, parameters and eligibility criteria, see Eaton and Boyer (1995).

In-Service: These are educational sessions for teachers held during a regular school day. Normally, all classes are suspended during such days.

Internship: In the context of the NSSWT program, these are organized opportunities for teachers to participate in a workplace for the express purpose of learning about the nature of the workplace.

Job Futures: This publication by Human Resources Development Canada provides information on careers.

Late leavers: All participants of the NSSWT program who completed the first, but not the second year of the program.

Leavers: All participants of the NSSWT program who did not complete both years of the program.

Level (of school course): Many courses in senior high school in Nova Scotia are offered at varying levels of difficulty. Four levels are possible: *graduation* (intended primarily for those who plan to enter the labour market directly from high school); *open* (intended to be attractive to a heterogeneous mixture of academic and other students); *academic* (designed for students intending to pursue a university education); and *advanced* (for academically outstanding students).

NSDEC: Nova Scotia Department of Education and Culture.

NSSWT graduate: All participants of the program who completed both years of the intervention.

NSSWT program: The program is defined by various objectives for students, employers and schools. It combines classroom education (in-school component) and work experience.

NSSWT project: The research project includes the program, together with the collection and analysis of data at the six sites aimed at assessing the effectiveness of the transition interventions. Included in the research project are the students participating in the NSSWT program and those serving solely as a comparison group.

Participant group: This group is composed of students who applied to the NSSWT program and were selected to receive the intervention components.

Quasi-experimental design: A research design similar to an experimental design in all respects except that random assignment is not used to select who will, and who will not, receive the treatment (participate in the program).

SWT: This is the generic abbreviation for school-to-work transitions. The NSSWT program is one example of an SWT program.

SWT11: This is the school course designation for the Grade 11 component of the NSSWT program. For each cohort, the NSSWT program is administered over a two-year period beginning in Grade 11 and receives a recognized school credit in both years.

SWT12: This refers to the Grade 12 component of the NSSWT program (see SWT11).

Superhost: Usually, this is a one-day workshop on customer service offered by the Tourism Industry Association of Nova Scotia.

University preparatory level: Courses taken at an academic or advanced level which meet the entrance requirements of Nova Scotia universities. Although courses taken at other levels may also be acceptable for some programs in some universities, the term is used to refer specifically to courses taken at academic or advanced levels.

WHMIS: Workplace Hazardous Materials Information System.

Work experience: A community-based experiential learning opportunity under the cooperative supervision of the project coordinator and the workplace employer/supervisor.

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APPENDICES

Appendix A. Primary Data Sources

Appendix B. Reports on the NSSWT Project

Appendix A:
Primary Data Sources

Name of data	Source/form of data	Time of data collection	Purpose and remarks
Registration form	Self-completed form	Between the end of Grade 10 and the start of Grade 11	To register interest in the program and to provide basic background and related information (gender, age, post-high school plans)
Initial student questionnaire	Self-completed questionnaire	Beginning of Grade 11	Serves as a pre-test, since it was administered at the beginning of participation in the project
Grade 11 student questionnaire	Self-completed questionnaire	End of Grade 11	Serves to document first-year program effects and concerns from student perspective
Grade 12 student questionnaire	Self-completed questionnaire	End of Grade 12	Serves to document second-year and total program effects and concerns from student perspective
1995 cohort follow-up interview	Telephone interview	One year after completing Grade 12	Documents actual transitions, labour market experiences and retrospective evaluation of the program
Initial parent questionnaire	Self-completed questionnaire	Beginning of Grade 11 (Same as initial student questionnaire)	Provides household and background information
Final parent questionnaire	Self-completed questionnaire	End of Grade 12 (Same as Grade 12 student questionnaire)	Documents program effects from parent perspective
Employer questionnaire	Self-completed questionnaire	At the beginning of the first student placement (throughout the program)	Obtain characteristics of firm, employer expectations and reasons for participating in the program
Supervisor questionnaire	Self-completed questionnaire	At the end of each student placement	Obtain characteristics of the work placement and supervisor expectations
Supervisor evaluation form	Self-completed form	At the end of the 1996 cohort's second work placement	Obtain evaluation of the participant's performance at the work placement
Initial IALS and ACT tests	Supervised in-class paper and pencil tests	Beginning of Grade 11 (Same as initial student questionnaire)	Obtain base generic skill scores to assess comparability between participant and comparison groups

Appendix A (cont'd)

Name of data	Source/form of data	Time of data collection	Purpose and remarks
Final IALS and ACT tests	Supervised in-class paper and pencil tests	End of Grade 12 (Same as Grade 12 student questionnaire)	Serve as post-test skill scores to assess program effects on generic skills
High school transcripts	Official school records	End of Grade 12 (after all marks were recorded)	Marks were obtained for all classes taken, beginning with Grade 9 and ending with Grade 12
First-year case study	Site visits, interviews and focus groups	Middle of the first year of the program	Interviews and/or focus groups with project coordinators, educators, parents, students and employers. Description of the first implementation year.
Second-year case study	Site visits, interviews and focus groups	Middle of the second year of the program	Interviews and/or focus groups with project coordinators, educators, parents, students and employers. Description of the second implementation year.
Project coordinator questionnaire	Self-completed questionnaire	End of the final year of the program	Description of the third implementation year
Strategic participant interviews	In-depth tape-recorded interviews	Middle to end of final year of the program	16 participants from the second cohort were selected on the basis of all combinations of gender, parental education, academic performance and post-high school plans. Parents of these participants were interviewed simultaneously by a second interviewer, and the project coordinator was interviewed about each of these participants.
Statistics Canada	1996 Census	—	Census information coded to correspond approximately with the labour market served by each site
Exit questionnaire	NSSWT leavers	At point of withdrawal from the program	Documents the approximate date and reason for leaving the program. This form was sometimes filled in by the project coordinator

APPENDIX B:
REPORTS ON THE NSSWT PROJECT

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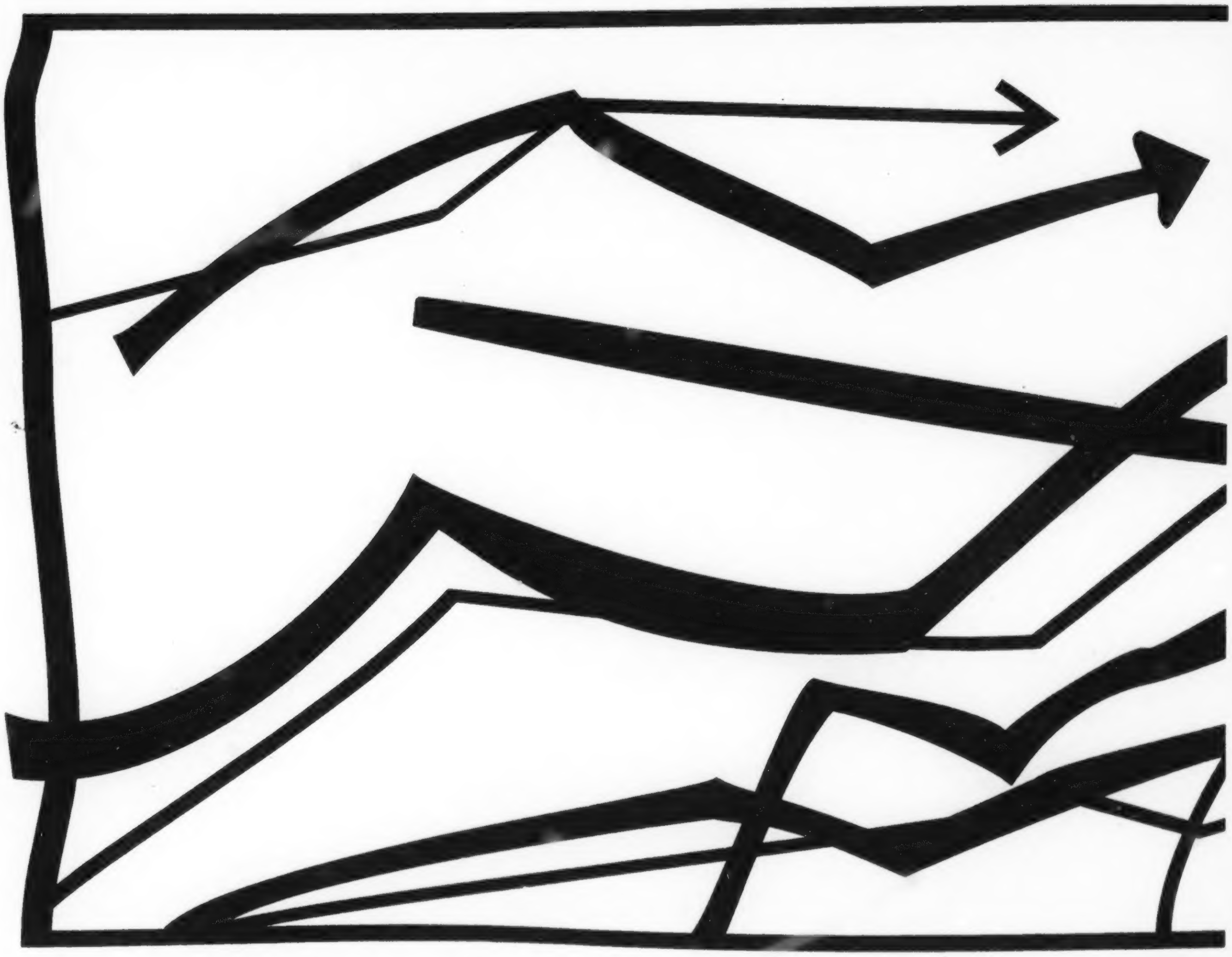

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